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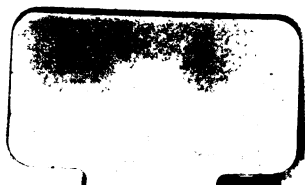
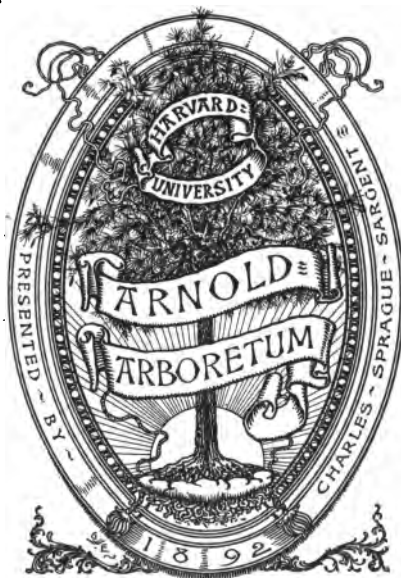
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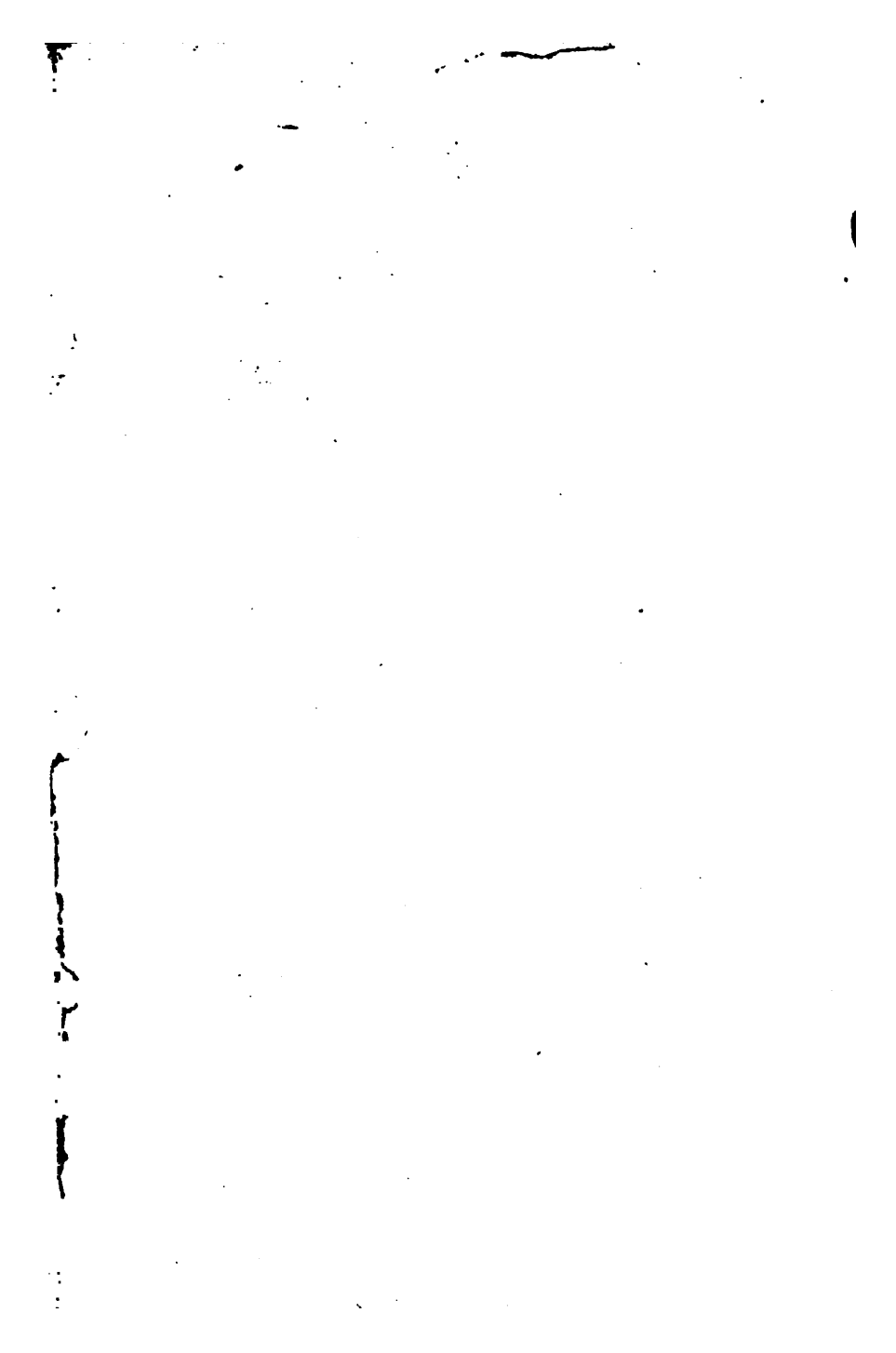
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NOTES AND THOUGHTS
ON
GARDENS AND WOODLANDS.



NOTES AND THOUGHTS
ON
GARDENS AND WOODLANDS.

Written chiefly for Amateurs.

BY THE LATE
FRANCES JANE HOPE,
OF WARDIE LODGE, NEAR EDINBURGH;
LADY ASSOCIATE OF THE BOTANICAL SOCIETY OF EDINBURGH.

EDITED BY
ANNE J. HOPE JOHNSTONE
(OF ANNANDALE.)

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P R E F A C E.

THESE Papers appeared originally in the *Gardener's Chronicle*, and *The Garden*, and are reprinted by kind permission of the Editors. In presenting them to the Public, in a collected form, I need say but little.

The wish and intention of my beloved, and lamented Friend, that such should be done by herself, had she lived, was expressed to me, on the very morning of the day, of her most unexpected Death. The reason she gave me, for this intention on her part, was, the repeated requests, she had for years past received, from many different quarters, that she would allow these Papers, to be thrown into one Volume, for more easy reference, by those, for whose instruction, and benefit, they were chiefly written—viz., the large body of Gardening Amateurs, many of whom, did not take regularly, the excellent Journals of Horticulture, in which they first appeared, and for which, they were originally written. To Miss Frances Hope's many Personal Friends,

such a Volume will be a tenderly treasured, and valued Memorial. To the still wider circle, of her Professional, Scientific, and Amateur Friends, and Correspondents, whose acquaintance she so highly valued, and esteemed, these words, and thoughts, of hers, will be a valued Book of remembrance ; whilst, to the general multitude of Gardening Amateurs, to whom, although personally unknown, she was always so glad to contribute, the aid and help, of her own great science, practical experience, and knowledge, the many useful hints, and suggestive thoughts, in these Papers, will be a rich mine of valuable information, to explore, and to reduce to daily practice, in their favourite pursuit, which she herself, had such unfailing, pure, and elevating enjoyment in, and appreciation of.

Those, who, like myself, have been privileged so highly, as to be her constant companions, in all her Gardening, Woodland, and Botanical studies, and researches, will agree with me, in thinking, how well, and appropriately, the following quotations, extracted from the preface to Mr. Robinson's—(Editor of *The Garden*)—delightful Work, *On Alpine Flowers*, describe, the deep, and earnest spirit, with which Miss Frances Hope contemplated, and entered upon, these, her daily pursuits.

I quote the passages—

“A garden is a beautiful book, writ by the finger of God. Every flower and every leaf is a letter. You have only to learn them—and he is a poor dunce that cannot, if he will, do that—to learn them and join them, and then to go on reading and reading, and you will find yourself carried away from the earth by the beautiful story you are going through. You do not know what beautiful thoughts grow out of the ground and seem to talk to a man. And then there are some flowers that seem to me like over-dutiful children: tend them but ever so little, and they come up and flourish, and show, as I may say, their bright and happy faces to you.”

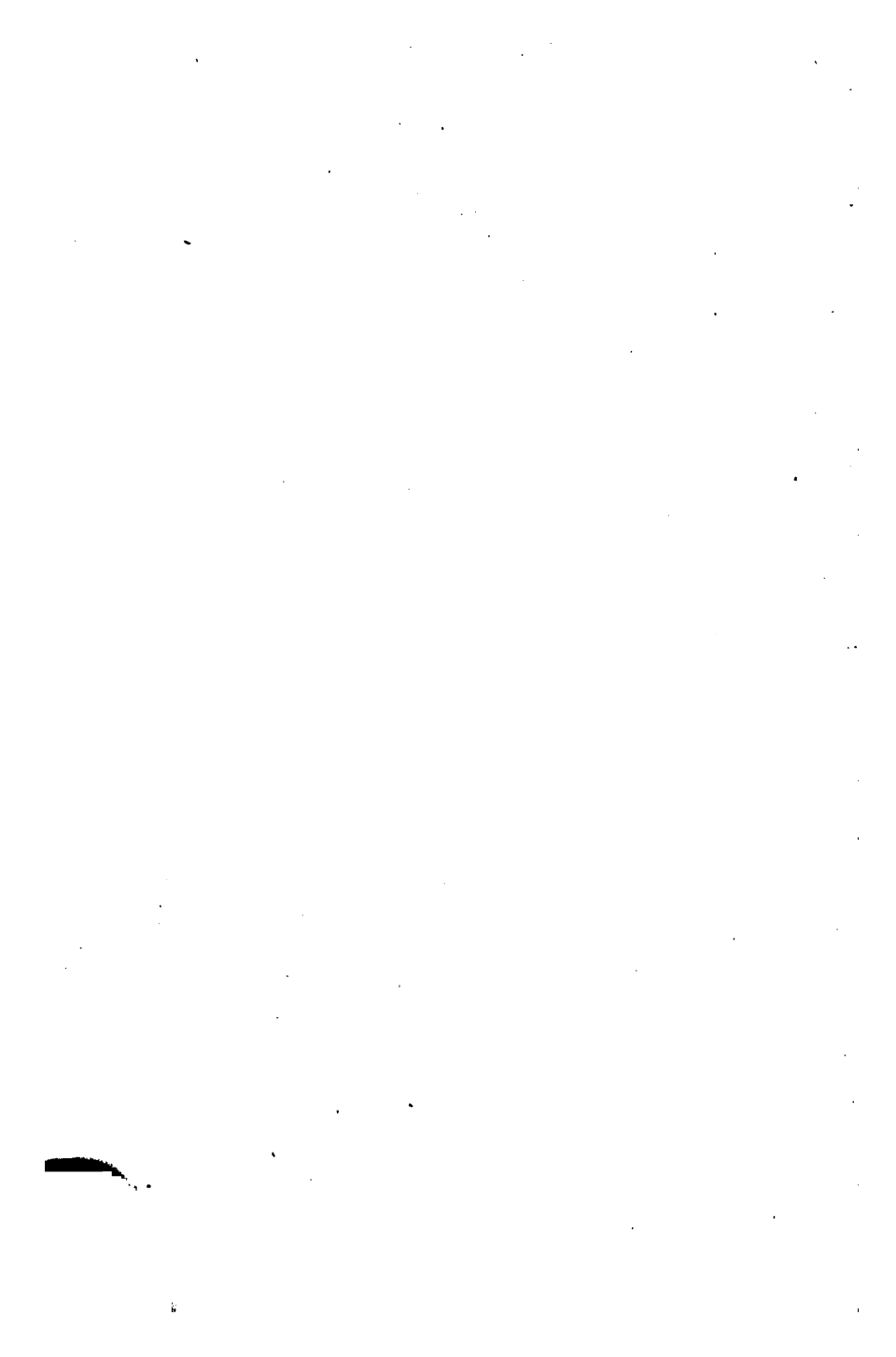
And again, speaking of Alpine and Wild Vegetation:—

“It forms a veil of strange intermediate being; which breathes, but has no voice; moves, but cannot leave its appointed place; passes through life without consciousness, to death without bitterness; wears the beauty of youth without its passion; and declines into the weakness of age without its regret.”

ANNE J. HOPE JOHNSTONE.

MARCHBANK WOOD BY MOFFAT, N.B.

March, 1881.



FRANCES JANE HOPE.

Died April 26, 1880.

"It was Spring time, wooing Summer, with a coronet of bloom,
And draping with its wilding flowers, the entrance to the tomb,
When she slept, in simple faith and love of Him who came to save,
And the green grass, and the daisies, wrapt a true heart in her grave.

Still one other, to the number of the vanished ones from sight,
Not hidden by the shadows here, but by that upper light;
Missed, and mourned, as they are ever, who, with humble, fervent
zeal,
Seek the Saviour's highest honour, and this sad world's truest weal.

Sacred ministry of sorrow ! tears that soothe the aching eyes,
As they gaze into the grave's deep gloom, or glory of the skies ;
Solemn thoughts that grieve, yet gladden, as we count those, near
and dear,
Who are gathering there to meet us, as we grow more lonely here !
Less to live for—more to die for ! So earth's Home-life fades away,
And the other Home, in Heaven, seems more real, from day, to
day."

MEMORIAL EXTRACT.

THE following Leading Article, extracted from the first number of *The Gardener's Chronicle* (May 8, 1880,) after Miss Frances Hope's death, will be of interest to those readers, who had not the privilege of a Personal acquaintance, with Miss Hope. I therefore, by permission, quote it in this Volume.

ANNE J. HOPE JOHNSTONE.

FRANCES JANE HOPE.

THE announcement, of the sudden Death of this Lady, on the 26th ult., at her residence, Wardie Lodge, near Edinburgh, will be received with dismay and sorrow, by those who were privileged to know this enthusiastic plant-lover. Her plants were her pets, but in cherishing them she employed discrimination and tact, amounting almost to genius. Her taste in selecting plants, was only equalled by her skill in cultivating them. By her, a plant was grown, for the sympathy, and interest, it excited. It was not the mere brilliancy of a bedding plant, nor the formal symmetry of a florist's flower, that attracted

her attention. Her appreciation, was wider and deeper. She had all a botanist's love of flowers, without his pedantry. Most generous, in giving information, and in sharing her treasures, with any one, who had similar tastes to her own, she was not without a vein of sly satire. Such a plant, was called by such a botanist, by this name, by another, a different name was applied—a third, had called it so and so; all these names, those of the plants, and of those, by whom the names were given, were registered on the tally. A visit to her greenhouses, was in this way, not a wholly unalloyed pleasure, to those who happened to be "tallied," in the manner we have mentioned. There was always the excuse of "synonyms," to take refuge behind, albeit the lady was quite keen enough, to be able to weigh its validity! Miss Hope was to a large extent, her own gardener. That goes without saying: not many gardeners, possessed her knowledge of plants—very few, have equal zeal and interest in them. To very many gardeners, the garden is everything, the plants are mere accessories. This was not Miss Hope's way, of viewing things; for her, the garden existed for the plants, not the plants for the garden. It was this spirit, which led her to affix a conspicuous announcement, to a bed of Hellebores, or what not—"This Bed is *not* to be dug." How many of us, there are, who will sympathise with the feeling, that prompted that injunction!

Another characteristic of Miss Hope, was her taste in arranging Flowers, her fertility of resource, her originality of conception, her daring combinations. It is impossible, to convey an adequate idea, of these, on paper. Although she herself, frequently contributed hints, on this very subject, to our columns, it was only by personal inspection, that the Art, and Learning, she displayed, in these arrangements, could be appreciated.

Miss Hope was the youngest daughter of Mr. James Hope, Writer to the Signet, and niece of Dr. Thomas Hope, Professor of Chemistry, and Pharmacy, in the University of Edinburgh, to whom, Wardie Lodge then belonged, and who, in his leisure hours, indulged a taste for plants, which he inherited, no doubt, from his father, James Hope, M.D., Professor of Botany in the University of Edinburgh—a man, justly eminent in his day, as a teacher of that science, and who, to show his respect, for the great Linnæus, erected a tablet, which is still standing, in the Botanic Garden, bearing this inscription :—

LINNÆO

POSUIT

J. Hope.

The branch of the old family of Hope, from which Miss Hope was sprung is that of the Hopes of Craighall and Pinkie, now represented by Sir Archibald Hope, Bart. Miss Hope leaves behind her, two

brothers, Writers to the Signet, one, Mr. John Hope, being justly eminent, for his great services, and the much good he has done, in the cause of Temperance.

The same spirit of benevolence, which characterises her brother, influenced his now departed sister, in many beneficent acts, unostentatiously done. Her love of plants, was throughout most notable, and its ardour was so strong, that she thought little of a trip to Aberdeen, to secure some much desired Hellebore, a tribe of plants, of which she was passionately fond, and of which, she possessed a greater number of species, than could be found in many public gardens. With a great love for all Herbaceous Plants, she was, like many more of the present day, passionately fond of all Bulbous things. Many fine Old Plants, now lost, and neglected, in many places, where they should be found, she rescued from oblivion. She was great in interchanges, and many Amateurs, all over the kingdom, will, says Mr. I. Anderson Henry, to whom we are indebted, for some of the particulars, now given, read with deep regret, the sad intelligence, of her demise, when still in middle life.

The Rector of Market Deeping, writes :—

“ I should like to add my testimony, to the loss, all lovers and growers of flowers, have sustained, in the death of Miss Frances Jane Hope, of Wardie Lodge, near Edinburgh. She was no ordinary person. Inheriting a love of botany, from her uncle, the celebrated Dr. Hope, she was not so much a

Botanist as a Gardener. To her, it was a greater pleasure, to cultivate her flowers, and make them happy, than to classify, and dissect, them. Her Garden, was the great interest of her life. She was up early, and at work late in it—working as hard as her men, and doing everything, much better than they. She spared no pains, to add to her collection, and had visited every Nursery Garden of importance, in England, and Scotland. Her heart was open to flowers, of all sorts. She loved even those, which others thought dull, and unattractive, and discovered beauties in them. No plant was despised by her, and she made use of the meanest, as well as the noblest. In Winter, for example, she would fill her Beds, with common curly Kale, of many shades. Thus her garden, was as suggestive, as most gardens, are commonplace. Many visited it, and drew inspiration from it. Her Drawing-room, with its large window, overlooking the Sea, was adorned each week, with fresh combinations of Flowers, arranged with untold thought, and study, and she would mix with perfect taste, the humblest leaves, and flowers of the field, with choice exotics, and rare greenhouse plants, and mosses. So kind, and true, a friend, was seldom seen. Long before the days of ‘Flower Missions,’ her flowers, found their way to many a Hospital, and Sick room. She grew certain sweet-smelling Herbs, on purpose, for posies, for the poor of Edinburgh. Her bright, handsome face, will long be missed. Many a one, both in England, and Scotland, as he walks round his garden, will point sadly, to some choice plant, and say, ‘I got that, from dear Miss Fanny Hope.’ No lady, that I have ever known, or heard of, was so good a gardener, or loved flowers so well.”

Another Friend writes :—

“ ‘That kind lady, Miss Hope, of Wardie, is dead,’ was the exclamation at our breakfast-table, to the grief, of all who heard it. You must allow me, to add a small stone to her cairn. She was not only a valued correspondent, but

it was one of the pleasures of my year, on the way home, from farther North, to pay a visit, to her most inviting Garden, where her warm, kindly, welcome, and the way she went over her favourites, one by one, made the day a very pleasant one, while the constant, 'Would you like it?' made it sometimes, difficult, to admire aloud. She had the true gardener's love of plants, for their own sakes, free from any question of ownership. I could see this, well, last year, when I had the pleasure of going with her, carefully, through the gardens here. In my Wild Wood garden is a bed,—one of the most successful ones,—called 'Miss Hope's Bed,' in which, every plant, was given me, by her. As one beautiful flower, after another, comes out, it will call up a pleasing recollection, of a valued, lost, friend.—*George F. Wilson.*"

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NOTES AND THOUGHTS
ON
GARDENS AND WOODLANDS.

NOTES AND THOUGHTS
ON
GARDENS AND WOODLANDS.

THE WINTER OF 1879—80.¹

THIS has been a winter of trials in this particular locality. The only common evergreens pleasant to look upon were Hollies, Boxes, Rhododendrons, and Laurels. All Aucubas and Sweet Bays will have to shed their black shrivelled leaves—the leaf-buds are pushing and unhurt.

There will be no flowers on *Laurustinus* or *Artutus*, and both shrubs will require cutting down, if it be not wiser to start fresh with young plants, which we intend to do with *Euonymus* of sorts. Many of these are killed outright, and all too damaged to risk a second bad summer and third severe winter.

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¹ *Gardener's Chronicle*, March 30, 1880.

As we expected, *Griselinia littoralis* succumbed at once in December. Myrtles, and *Laurus nobilis angustifolius* on the wall, are killed to the ground, and it remains to be seen if they will spring from below. *Gum cistus* will die—every week or two another branch gives way.

We had not a Snowdrop until late in February, and will again have no Wallflowers or Stocks. A real trial this, not lessened by our having given the Stocks an extra good bed—thus, as it turned out, insuring their deaths; but really one can hardly blame oneself for failures when caused by unprecedented seasons. Walking round Edinburgh Castle the other day, I observed the Wallflowers all safe there, in the starved nooks amongst the rocks, and have an idea of sowing seeds about an old wall, and thus making sure of flowers in 1881.

To counterbalance these disappointments all Hellebores have flowered and are flowering extra well, with the exception of *Helleborus angustifolius*, which is killed to the ground; but this week I see symptoms of its breaking from the root, and will leave the woody stems and leathery foliage to protect it yet a while.

Hellebores seem to have liked the cold wet summer of 1879. The *Helleborus niger maximus* bed was a sight, and being retarded by the storms in December and January was in beauty all February, and—what I never saw before—the honey-bees were working busily about the flowers on February 11.

This gives us a faint hope of seed, and we are once again trying if the seemingly well-set pods will produce seed, and have given protection from frost and wet.

The spring flowering sorts are all now in flower, with the exception of *Helleborus colchicus*, and make a varied and fine show in the spring border. Last winter they failed entirely, as well as the large-leaved Saxifrages—"Megasea" I see they are now called. *Saxifraga ligulata speciosa*, from Mr. Niven of Hull, and *Saxifraga ligulata rubra* from Belvoir, are the two earliest, and have been fine. *Saxifraga cordifolia* is just coming out, and its variety, *purpurea*, which we got years ago from Dr. Lowe, fine dark lilac. A white variety would be a grand addition, even if it faded to pink, like *Saxifraga stracheyi*; this last was in flower in the cold frame, and is quite beautiful when it first comes out—pure white with bright red stalks and calyx; I do not know if its leaves ever come good—the poor foliage is its drawback.

Rhododendron dauricum, *R. præcox*, and *R. præcox superbum*, as well as *Daphne mezereum*, have flowered beautifully this year. We had not one flower of the sweet *Tussilago fragrans*, although a special bed was prepared, and flowering crowns selected and well done to. We did not wish to be a second winter without the "winter Heliotrope," as some call it, and did our best, but it has failed. *Chionodoxa luciliæ* I saw in the Botanic Rock

Garden, much stronger than ours in the cold frame. So we shall plant them out—but were afraid to risk the bulbs, kindly sent me by Mr. Maw, their first year. It is larger and darker out of doors.

Leucojum carpaticum is just in perfection, growing beside *Leucojum vernal*, which is long past in seed.

I think it is a great advantage to grow this late sort, prolonging the Snowflake as we do the Snow-drop season.

The different varieties of *Galanthus* in the Botanic Garden were very marked—small and large, broad and narrow, early and late.

Narcissus are very late, and I expect we shall lose one great charm of this family—the way they succeed each other—for they promise to flower all together. *Narcissus minor* is the only one in quantity; *Narcissus obvallaris* used always to be the earliest, but we had lately ten days of bitter east wind and low thermometer (7° to 12° of frost), accompanied by glaring sun—very trying for the spring flowers; even the Saxifrages hung their heavy heads, and young leaves of Primulas are withered and killed.

These two winters and one summer have spoilt our spring beds and borders, and a thorough upturn and change of plan will be requisite. It was impossible to use a fork or hoe in 1879 in our soil; the result of the leave-alone system is a carpet of *Marchantia* and *Hypnum sericeum*; to scrape these pests off does

no real good, for the earth is caked below and impervious to air, sun, or rain. So we are longing for our bulb treasures to be up, and to get on to our alterations, do away with rings and surfacings, and whatever prevents us loosening the earth between each plant.

Looking at our border, the only real advantage of what is called bedding-out struck me forcibly, being the thorough working and justice done to the soil.

While writing the wind has got round to the west, and a skiff or two of rain has made all the difference in the look of the spring flowering plants and shrubs.

Dentaria digitata is not half enough grown or appreciated. I observe strangers set it down as a sort of Honesty, forgetting its being in flower six or eight weeks earlier, and merely seeing a Lilac crucifer in bloom. It is a first-rate spring herbaceous plant, we consider.

Of Primulas (rather a heart-break here) the *denticulata* sorts never fail, possibly from their being almost deciduous, and their long roots are kept cooler in our light soil. *Primula kashmiriana* has stood perfectly and is in full flower, also *Primula rosea*. *Primula capitata* we did not venture out of the frame, but I saw it all right in the Botanic Garden. Auriculas, too, from being mulched after

the first severe storm, are promising well, while the common single Primroses, with the exception of McNab's red, are dwindled away, as well as hose-in-hose of sorts, and the fine coloured Polyanthuses. The laced sorts are lasting better, but then they were seedlings, and I suppose we must just make up our mind to be satisfied with seedlings and give up propagating by division. This is another chronic trial, not merely one of winter 1880, for it is aggravating to raise or get a flower that pleases us, and increase it to a good stock, and then off it goes.

We used to have beds and edgings of *Primula helvetica* and *nivalis* (*helvetica alba* ?) and now merely have them ; ditto double Primroses, eleven sorts ; even Cowslips disappear.

We have had to take out our hedge of Rosemary where backed by the wall, and Lavender, and all our Thyme edgings—seven sorts, all equally damaged ; and our plans have to be altered for this summer, and a fresh stock propagated for winter. We cannot do without Thymes. We find Dog-tooth Violets do better and increase quicker than any of the other bulbs planted in the grass banks ; the leaves are as beautiful as the flowers, and keep much longer fresh and deep marked than when in the borders.

To sum up, we have more deaths to record this winter than last, and sundry herbaceous plants have not as yet appeared, but we are only this week fairly

pruning our Roses (terribly cut down), and cutting over the herbaceous plants and forking-in our leaf-mould mulching, hoping to be ready for dividing and planting our hardy treasures, still safe in frames, when April weather sets in.

WIRE WALLS.¹

WE have a five-foot wall for growing China Roses and Chrysanthemums.

With the stupidity one is occasionally afflicted with, we turned out three *Clematis Jackmanni* at the foot of this wall. They were little plants in little pots.

Of course the very first season they were a trouble; by the second a perfect nuisance. They must be torn up;—but the growth and colour were exactly what was wanted as a background to the mixed herbaceous border in front of the wall, every plant being set with a reason, and all would be spoilt if these splendid blue-purple flowers were wanting to bring out the graceful little trees of *Acer negundo variegatum*, double-scarlet *Lychnis*, Lilies of sorts, Tritomas, yellow and orange single Dahlias; every colour save that in the *Clematis* was in the border. Was it to be? Give up the smothered Roses, and the whole wall to the *Clematis*, or pull them out?

¹ *Gardener's Chronicle*, April 12, 1879.

It is sometimes well to be set betwixt two distasteful alternatives; obstinacy strikes out a way of escape; and in this case the idea took hold of me that we could nearly double the height of the wall with one of wire.

The Clematis should have their free will, and we would carry out our plan.

Many were the objections;—the full force of the north-west and south-west winds would blow wire and plants to tatters, nay, bring down the brick wall on which it was reared. Wire-netting was, of course, no protection—just a riddle for the wind to tear through, and certainly a more exposed situation for our experiment could hardly have been selected. But the village blacksmith knew what wind is on this coast, and a strong frame, and supports, and holdfasts, were made, and the result has been, for three years, a complete success. We simply arranged the first shoots in the fashion we wished, so as to have the whole space covered, and the plants did all the rest and were no trouble, but much interest in observing how any weak branch merely gave another turn or two to its leaves, and all was tight and safe.

No squall or storm had the least effect. The framework, the notion of which I did not fancy, but which the smith insisted on being necessary, was entirely concealed, and we were continually asked, "How does that Clematis grow up in the air?"

Now it seems to me we might have very great additional enjoyment and instruction from our gardens by the adoption of what I would simply call a wire wall,—not an ornamental trellis, but one with strong supports, fitted to stone, deep in the ground, and a broad coping, as it were, along the top and down the ends, to which the netting might be very securely attached.

If the effect is to be light and airy, there must be much concealed strength, and no slipslop work. I would employ a blacksmith and not a wire-worker, and once for all lay one's account to having a good equinoctial every month. Here zephyrs are only poetical trifles, our west winds being more damaging than the east.

I can imagine such a wire wall as a centre line in a bed of sufficient breadth, or in a border lying in the right direction, so that on either side of the centre line there would be a good breadth of ground sufficient for three or four rows of plants sloping down at regular or irregular heights, and a very delightful effect would be the result. Then we should be able at our leisure to study the varied modes the different climbers employ to attach themselves, and strengthen or loosen their hold according to weather and circumstances. We learnt many things from the Clematis wire, and also from one we have for Bryony.

Do we not all know after a gale the destruction

of creepers that are secured to stone walls, and poles, even branched poles and sticks, by artificial tying,—how Bryony and Tamus slip down the pole in a heap, never again to look well, but bruised and smashed?

Never do we see such damage in hedges, or where climbers can run over trees, fixing and securing themselves; and as we cannot have a growing wall, *i.e.* a hedge, in our borders and beds, I believe a wire one would answer well. So much at present for the gardener's and plant-grower's point of view, but there is something to be said on the scientific side of the question.

Mr. Buchan, Secretary of the Scottish Meteorological Society, in his notes read before the Botanical Society on January 8th, 1874, gives many interesting facts to prove that there is much resistance to the wind in an "ordinary fishing-net," or "a light wire screen," that "the flimsiest protection to windward, such as a few bare twigs, presented an obstruction to the wind so effectual as to produce a calm, or all but a calm, on the lee-side."

But there is "a peculiarity of the wind which, not being generally recognised, may be here further illustrated. A fence made of slabs of wood three inches in width and three inches apart from each other is a protection even during high winds to objects on the lee-side of it. In this case the fence does not admit of a free passage to the wind through

interstices so wide." And in another paper, read April 12th, 1877, Mr. Buchan says, that "a tree or bush raised the temperature all round, or to speak more correctly, arrested to a great extent the fall of temperature."

I gather therefore, that the wire walls I suggest (planted with twining and leaf-climbing plants), would both raise the temperature of the soil on either side of the centre line, and form at the same time an efficient resistance to, or possibly I should rather say, moderate admission for, the passage of the wind, thus giving two distinct forms of protection to the plant in the bed or border.

For those who have the means and the will, it would be instructive to try various sizes of mesh in different positions, so as to prove what size gives most protection, and at what angle the prevailing wind of the district is safest turned aside.

As soon as the weather turns spring-like there is certain to be a most rapid rush in growth of vegetation; if therefore wiring is to be employed for Clematis, no time should be lost in getting it ready.

To heighten a wall where climbers are planted with wire netting, is certainly much cheaper than brick or stone.

CHRISTMAS ROSE.¹

WE have at present (February 6) eight varieties of this invaluable family in flower. The Major variety of *Helleborus niger* has been in bloom since October, and for the last three months we have had a supply of its flowers, some three dozen weekly. Why do not *H. niger* and its varieties seed? My ignorant attempts have failed with the large variety. *Cloches* are very useful for protecting the blooms, but must be used with judgment.

We injured our plants seriously two winters ago, and as the leaves were weakened and many destroyed there was no bloom next season on the protected plants. In the open border in a hard frost, the *cloches* get fixed to the ground, and the flowers are covered with mould when you get the glasses off. Of course this will not happen "alongside a plant stove," and we deserved to suffer for our gross mismanagement: the Hellebores unfortunately suffered likewise, and, hardy and easy of cultivation as they

¹ *Gardener's Chronicle*, January 17. 1872.

are, my experience has warned me that no plant suffers longer from rude treatment of its foliage.

But with winter-flowering plants, as with spring bulbs, there is in most gardens, I observe, a very ruthless mode of management.

They are no longer required, and are therefore neglected and abused, until winter comes round again, when their blank, which nothing else can supply, is felt too late to be remedied.

Tussilago fragrans is another winter blooming plant, not half enough grown: some ten or twelve heads of bloom are perfuming our room at present; it looks best in a glass by itself, with its own leaves.

LARGE-FLOWERED CHRISTMAS ROSE.¹

(*Helleborus niger maximus, major, grandiflorus.*)

I ALWAYS fancy that *Helleborus niger major, maximus*, and *grandiflorus*, are provisional names for this grand Christmas Rose; but, as yet, it has no other. With reference to this valuable winter-flowering plant, your correspondent "Salmoniceps" (see p. 482), writes that "it is very easily increased."

As such a remark may lead to this plant becoming still scarcer, I will here note down some practical hints on its propagation, which, from this particular Hellebore having been for years a speciality here, I am enabled to give.

It seems to me that a plant that will not seed, nor strike by cuttings, nor divide like *Dactylis*, nor chop up like *Verbena venosa*, can never be, in the popular sense, "easily propagated."

It is about six years since Mr. McNab told me how to propagate this particular Hellebore from the root; and in conversation with Mr. Peter Robertson

¹ *Gardener's Chronicle*, December 25, 1875.

of Trinity, he suggested as a suitable time when the leaves were at their ripest, that being the rule in collecting the roots of the Hellebore of commerce.

Upon these instructions I worked, having a large stock of plants at my command; and I do not deny that I was most successful from the first, and have increased my plants by the hundred. Notwithstanding this, it will always be a slow plant to propagate. The clumps operated on must be well-established plants, that have formed root-stocks large enough to be worth cutting up; and the pieces of roots must lie dormant, so to speak, for the best part of a year, and are safer left alone in the root-bed for two years.

They should then be transplanted into their permanent bed; and if undisturbed, will be good flowering plants in another couple of years.

Four years in short are required to bring a Christmas Rose to perfection. By July, this Hellebore is in its strongest vigour. During that month the operation of lifting the clumps—only two or three at a time—is commenced, these clumps being at once wheeled to a cool shed.

In breaking up the plants in the ordinary way, the principal point is, to avoid as much as possible the loss of leaves; then cut off as much of the thick root-stock as can with safety be spared, leaving the true roots attached to the neck of the plant intact, and at once re-plant the divided clumps in their permanent

quarters, watering carefully, and, if necessary, shading with a branch until evening, the object being to prevent flagging, to keep up the appearance of the bed or border during the summer, when this Hellebore is valuable for its foliage alone, and to ensure the flowering of the clumps. The growing plants safe, we commence cutting up the root-stocks, and here I may confess to the sad waste of plants that yearly took place through my ignorance, for these useless old roots were thrown away after the manner adopted with the hard pieces of Primulas. (Can anything be done with these, by the bye?)

Sitting down with a sharp thin strong blade, I cut up the root-stock into pieces from one to two inches in length, according to the appearance of the buds, or swellings; some of these may be "blind," so close attention must be paid to the work, and at times you will have to sacrifice an "eye" (so to speak), in making two plants of a piece of root, or, what is wiser for the amateur, be satisfied with one plant and keep all the eyes. But there is a dangerous fascination in seeing how many safe cuts you can make in a lump of root, and one turns it round and round before deciding on the best angle to take to make most, and lose least. In these doubtful cases, however, I now resist the temptation, and leave the piece whole, being sure that a finer plant will thus be all the more quickly secured.

I am particular in planting each day's roots that

have been cut up the same day, leaving nothing for the morrow, and I therefore only lift what can safely be disposed of that day. Plenty of sand is needed in the shallow bed of light soil, and a gentle watering with a fine-rosed pot when the lines are filled up and the bed full, completes the business. A label, numbered and dated, and the number of pieces of root noted down, is set in each bed. Possibly there will not be in the whole bed one leaf visible above, or a single true root below; but, by the following April, if genial weather prevails, and you have good fortune, you will see the lines cracking, and a loop of young leaf coming through here and there, day by day, and then it is well to lay lightly a few thorn branches over the bed, as a protection against cats and birds. I should much like to trace the origin of this Hellebore, but no one to whom I have applied can give me any information. Some wildly assert that it is a seedling from *Helleborus niger*, but all agree that the north of Scotland is its home. My own acquaintance with it dates back to November, 1863.

Hearing often of a wonderful Christmas Rose at New Liston, Mr. Hogg's property, some ten miles from Edinburgh, I drove over to see it, and was kindly given a good plant, which had been obtained from Aberdeen; and from that time I have never relaxed my efforts to increase our stock—first, by the usual slow process of division, and by begging and buying bits wherever I found the plant; then

by sending a trusty man to the north, who secured some dozens of old clumps; and lastly, when enlightened by Mr. McNab, by going myself to Aberdeen, and with the aid of a "lorry" from the railway station, and sundry casks and sacks from the docks, in which to pack my booty, I reached home with a really sufficient stock. Those palmy days are past. The London nurseries are now far better stocked with it than the Aberdeen ones, and their owners know how to secure what is so well worth looking after. One ought to have four lots, and in rotation yearly cut up one set of plants.

It is of no use tormenting and giving a check to younger plants, and if left too long—say six or seven years—we find there are many dead and blind buds; nor is it the most imposing clump of leaves that has the largest crop of roots; in fact, until lifted, one cannot be certain of the result. As to the seeding of *Helleborus niger* and its varieties, I am curious to learn. Mr. Ellacombe is my only authority; he wrote to me, "I certainly include *Helleborus niger* among the Hellebores that sow themselves. I have had seedlings at different times; but they are not common."

Bitton is quite an exceptional place, and I hope *Helleborus niger major* will seed there also. Any to whom I put the question first affirm that the common Christmas Rose does ripen seed, and then when they come to think, and wish to prove the fact, they have

to back out of the assertion ; or I am put off with the well-known examples of *Helleborus foetidus*, and *Helleborus orientalis*, which yearly have a bed of seedlings around the parent plant.

To be sure, *foetidus* is not esteemed for cut flowers, and *orientalis* does not last in water unless the flowers are cut short, with their own inch or two of foot-stalk, so both these sorts are left alone.

I have repeatedly tried to seed *Helleborus niger major*, in both open and severe winters, in a south border of light, and shady beds of heavy soil. Fine clumps bearing from three to six dozen stalks of flowers have been selected in such seasons and situations. One has been covered close with a *cloche*, another has been properly aired under a hand-glass, a third protected with a few branches ; but the result has been that although the pods seem to set and swell, they come to nothing.

I have tried leaving the whole crop of flowers, and cutting off all except five or six of the best blooms, and have taken those that seemed promising into the house.

I have saved, for experiment, the first and the last flowers, that open in October and March. In short, I do not believe it will seed, here at least (is it a hybrid?), and I have quite given up the fruitless attempt.

Perhaps at Bitton it may succeed, or with "Salmon-iceps,"¹ who has a fine climate, and, I hope before

¹ See Appendix, No. 7.

increasing his plant by the root, he will try to get it to seed.

At p. 476 your correspondent "Oxon" suggests a very dangerous proceeding with Hellebores. "They force well," he says. The fact is, they do not require forcing; merely lifting and putting them into the greenhouse brings them on quickly; but they dislike it, and in most places do not thrive after such treatment. I know several gardens where Christmas Roses were potted, and brought into the house every winter, and the consequence was that there was not a Hellebore plant worth looking at about the place for years after. I may as well own we have been guilty of this unwise practice, and in one day lost and hurt many a good clump, although we did the plant all justice afterwards; and I have no doubt "Oxon" succeeds better than we did, still, he will find that Hellebores resent being meddled with in this way. It is a melancholy sight to a true lover of plants to go in spring to back premises and out-of-the-way corners, in most establishments, and see the waste and destruction of hard-wooded, soft, or bulbous plants, that takes place after the forcing season. They are no longer useful or ornamental, and are stowed anywhere out of sight until there is time to attend to them; meanwhile their pots are required for spring shiftings, and they are ruthlessly turned out with their roots roasting in the sun, or exposed to the east winds, the end being that, when they can

be attended to, a large proportion is wheeled off to the rubbish heap.

Of course this need not, and ought not to be the practice; nevertheless it is what happens yearly, and is especially vexatious in the case of Hellebores and Hepaticas, for no two plants suffer more.

Hardy plants, I think, should be enjoyed in their legitimate place and at their natural season. It may indeed be asked whether the practice of forcing plants is a healthy instructive one? I deem it is not, and, for amateurs, not one to be fostered. It may be very right in properly organised large establishments, but there you will find a hothouse full of *Eucharis amazonica*, and a cool conservatory for white Camellias—Christmas Roses, which are not required, are therefore left safe in the shrubbery borders. I always wish that those who will have birds in cages and chains, would keep to canaries and parrots, and leave our native larks and bullfinches alone. The same principle applies to plants—keep to Bulbs that have been grown for generations for forcing purposes, and endless exotics, and leave our Hardy plants in the garden.

That is the place to appreciate Christmas Roses; and it is easy to have *cloches*, or some sort of protection to save the flowers if the winter is severe, and a very gentle exercise for even a frail amateur would be to lift such protections off and on, or, if this is too fatiguing, better have the flowers cut and

keep them in water, where the buds will expand and the flowers last for weeks. In water the fine stalks of *Helleborus niger major* are very beautiful, with the red spots and markings brightened and magnified in the clear glasses. All they require is a slice clean cut off when the extremity of the stalk gets discoloured or splits up.

Let me conclude with a hint or two for amateurs who exchange plants and may have *Helleborus niger major* to dispose of. Always give away healthy young plants that are sure to flower, and may divide in a few months into two or even three plants, but keep every inch of root-stock for yourself, and all weak little plants that would merely go into the dozen or hundred. You will thus gain much knowledge about the plant so treated.

One can never know too much about a plant; one never can know all there is to be learnt.

De Candolle's advice, in a letter to Mrs. Somerville, often comes to my remembrance when I am thoroughly studying the habits of some plant.—“I advise you, above all, to see the plants at all their ages, to follow their growth, to describe them in detail; in one word, to live with them more than with books.”

NEW CHRISTMAS ROSES.¹

HAVING been asked sundry questions as to the propagation of *Helleborus maximus* or *major*, I venture to answer them through your columns. Mr. McNab informed me that pieces of root would not succeed in heat, therefore I have never adopted that plan. Having been informed that large numbers had been lost by being propagated late in the autumn, I took warning, and have always kept to the season which has proved so entirely successful.

There is no danger in dividing Christmas Roses in the ordinary way at any season, when the weather and soil are suitable; but cutting up the rhizomes is quite another matter.

Possibly a year might be gained by doing this in spring, when there would be no fear of the pieces rotting, as they do in autumn; but would the "eyes" be as strong then as in July? The common Christmas Rose (*Helleborus niger*) has no root-stock worth working with; the largest clump of it can be broken up by the hand, and when well shaken will crumble

¹ *Gardener's Chronicle*, January 22, 1876.

into plants, so to speak, every two or three leaves having true roots attached to them. This is not, however, the case with *Helleborus maximus*, which has not a shallow-spreading root-stock like that of *Helleborus niger*, but one which gets hard and goes deep, and requires a spade to cut it. No one can break up an old-established clump of this kind by means of his hands alone, and its unwieldy roots dislike confinement in pots. It is to be regretted that your correspondent "Berks" did not allow his seedlings of *Helleborus niger* to flower. More than once I have been taken in triumph to a patch of "seedlings," which, on examination, proved, to the owner's mortification, to be only the produce of small starved portions of root that had been left when the parent plant had been removed.

Mr. Peter Robertson has tried crossing *Helleborus maximus* with *Olympicus* and *niger*, but without any good result. *Helleborus maximus* may be but a variety of the common Christmas Rose, but wiser heads than mine believe it to be a species. Neither in England, nor in the south of Scotland, have I ever seen this plant equal either in colour of leaf or growth to what I have seen it in Aberdeenshire.

Those to whom this Christmas Rose was new were delighted with the fine clumps of it which they saw about Aberdeen; and, truly, in out-of-the-way gardens there, judging by the foliage, it might easily have been mistaken for a pæony.

Leaving *Helleborus maximus* I want to elicit information respecting *Helleborus angustifolius*, which, if my plant is true to name, has large white flowers tinged on the back with rose. It is a most desirable variety, and one which, owing to the time at which it flowers, is more useful than even *Helleborus maximus*, coming in, as it does, at least two months later than that kind, and with me a little earlier than *Helleborus niger*. That it is a strong grower is proved by our reserve beds of it having been taken by a good judge of Christmas Roses for those of *Helleborus maximus*.

In another part of the garden, however, where the two kinds grow side by side, *Helleborus angustifolius* could never be mistaken for either *Helleborus maximus* or *niger*.

Mr. McNab told me the other day that there is a major variety of *Helleborus niger* distinct from *Helleborus maximus*; and certainly our *Helleborus angustifolius* would suit such a name. Its flower stalks, which bear two and three flowers on each, are comparatively tall and stout—a great advantage as regards keeping the blossoms clean and convenient for cutting. It is a very free flowerer, and it ripens its seed. Believing that no variety of *Helleborus niger* would seed here, we cut weekly, last winter, all the flowers off our border of *Helleborus angustifolius* for an Hospital, and one expanded bloom of it made a good centre for little bunches of

Thyme and Rosemary, which are favourites in such places.

On breaking up the border in June we found a single stalk that had been overlooked furnished with a promising seed-vessel. The plant which produced it was at once replanted in a south border, and on the 15th of July the seed-vessel burst, and twelve good seeds fell out, which were sown then and there in a pot, and set in a cold frame, the result of which I am patiently waiting to see. This particular Hellebore I got five years ago from Mr. Anderson Henry. I was attracted by its tall growth and fine flowers. I saw, by its stature, that with liberal treatment and care it would succeed with us, and I have not been mistaken. Its rhizomes are like those of *Helleborus niger*, but it is distinct from both that and *Helleborus maximus*.

SWEET-SCENTED GREENHOUSE PLANTS.¹

It always seems to me a pity that the plants in the mixed greenhouse are limited in variety, and that a show of flowers, even if only of one or two sorts, is the one point aimed at. We all know the look of the medium-sized greenhouse in small places, which is "always gay." In winter it is bright with Chinese Primroses and Dutch bulbs, succeeded in spring by Cinerarias, Azaleas, or Pelargoniums, Calceolarias, and Fuchsias in summer, with Japan Lilies and Chrysanthemums in autumn. If the owner of the greenhouse is omnivorous in his love of plants, the result is disastrous in the overcrowded stage of ill-used and ill-grown plants—Camellias with yellow foliage, Heaths in a dying state, or we might rather say, dead, for in the amateur's mixed greenhouse when a Heath is observed to be unhealthy, hopeless mischief has been done. But setting aside Heaths, which are an acknowledged difficult family to grow in mixed houses, look at the wretched state

¹ *Gardener's Chronicle*, May 12, 1877.

of the so-called hard-wooded plants, and we must own that *Epacris* and *Cytisus*, &c., are uninteresting when past blooming; and it strikes me in these ordinary greenhouses, so cramped for space, that no plant should be admitted that is not for some reason or other always interesting. For instance—

- (1) Plants of sweet-scented foliage;
- (2) Those whose habit or varied growth is peculiar;
- (3) Plants whose seed-vessels are interesting or ornamental; thus having two crops of beauty; or such as should be studied from the seed-pan and known in their different stages of growth, as *Acacias*, certain species of which in their young state could never be known by one unacquainted with the changes they go through;
- (4) Climbing plants, including specimens of Mr. Darwin's divisions, viz., twining plants, leaf-climbers, tendril bearers, hook and root climbers.

A selection from these four sorts of plants, with a sprinkling of the ordinary flowering occupants of the greenhouse, along with Ferns, Aloes, and Succulents, would make the amateur's greenhouse always varied and instructive, enabling them to appreciate more highly and learn better from botanic or large establishments which they may be in the habit of visiting. I do not see why we should encourage growth and progress in our plants, and get mentally contracted and stunted ourselves.

SWEET-SCENTED PLANTS.

To begin with plants of sweet-scented foliage, both soft and hard-wooded, as they give an immediate return.

Soft, are quickest grown and safest to cut. We have more than thirty varieties of Cape Pelargoniums of distinct perfume, but half that number would be a choice selection of the sweetest, leaving out the beautifully-cut Pheasant's-foot and *glutinosum* section, as the greenfly adheres to them, and they stick to the cut flowers they are mixed with, and stain gloves and dress when worn.

Capitatum, or Rose-scented, and its variegated variety, Lady Plymouth; *Quercifolium*, or Oak-leaf; Fair Helen, an oak leaf—the oldest; Fair Emily, Prince of Orange, and its variegated variety; Lemon-scented, Nutmeg-scented, *radula*, or Stag's horn, *Citriodorum*, and its minimum variety Lady Scarborough (of the *Citriodorum* section), *lobatum* or Peppermint, *Abrotanifolium* or Tansy-leaved, *Vittifolium*, or Balm-scented, *Laurenceanum*, or *Serrulatum*. There is great confusion with even these unsatisfactory names, but I have selected those by which they are most generally known.

Balm of Gilead (*Cedronella triphylla*), one seldom meets with, and Verbena (*Aloysia citriodora*) is never grown of sufficient size to cut freely from.

The Pineapple-scented *Salvia* (?) is another pleasant-smelling plant ; *Lavandula spica* (French Lavender), and *Prostanthera lasiantha* are sweet, and useful for cutting, lasting long in water, as are also *Cedronella incana*, and a *Scutellaria* (?) with pale lilac blossoms, both labiate plants of pleasant smell ; while *Teucreum marum*, not perfectly hardy, must have a place. *Humea elegans* overpowers all other perfumes, and adheres to whatever it touches, but many are partial to it.

Of hard-wooded plants the sweetest are the *Diosmas* and *Adenandras* (Heath-like plants), *Leptospermum* (allied to the Myrtles), and *Boronias*. *Diosma capitata*, *fragrans*, *ciliata*, and *speciosa*, are fresh and fragrant, lasting weeks in water, and retaining their leaves and sweetness when dead ; but beware of *Diosma crenulata*, the intolerable smell of whose foliage is not counterbalanced by its beautiful white starry flowers, in bloom in December.

The *Diosmas* and *Adenandras* are so mixed up in nurseries that it is prudent to see and smell the different sorts for oneself, and not vaguely order by a catalogue.

Of *Leptospermum*, *bullatum* and *scoparium* are desirable.

The latter is covered with its little Myrtle-like flowers, which ripen their seed and come up freely. All these small-leaved plants take up little room and are not affected by insects.

Boronia tetrandra has a very sweet leaf when bruised, not unlike the smell of the flowers of the well known *Boronia serrulata*, and the charming *Boronia megastigma*.

Boronia alata, again, with a good-sized lilac flower, has as pertinacious a smell as *Diosma crenulata*. They are a pair to be avoided; nevertheless that great charm of foliage belongs to them—viz, that unless bruised or drawn through the hands they do not give out their perfume like flowers, and are therefore innoxious. At the same time the perfume, or its opposite, is always there in its true character, unlike a flower which has an evanescent time of perfection, and which requires careful study to watch the exact time of ripeness.

But for one individual who looks for sweetness in foliage there will be a hundred who sniff at every flower, and yet never know the real delicious fragrance of a Rose, Carnation, Stock, or Mignonette, in its perfection.

How annoying it is to the thoughtful observer to have a sweet-smelling flower cut too soon, or when past its best; too early or too late in the day, when it has had too much or too little sun; too damp or too dry. Bees at flowers are like wasps at fruit, the very best judges of perfection; not having their instinct, and not using our own reason and thought, we lose very much enjoyment we might have from sweet-smelling plants.

Of greenhouse shrubs, the Musk-smelling *Aster argophyllus* is worthy of a place, both for the silvery upper surface of its leaf, which is brown underneath, as well as for its perfume, for those who like it. A Citron should be grown for its leaves alone, so refreshing; and Myrtles, say four varieties, should certainly be included. Every one likes sprigs of Myrtle, but because it is almost hardy few give a place in the greenhouse for good-sized shapely plants that would bear cutting and bruising *ad libitum*, and with foliage unbrowned by frosts and winds.

With the aromatic never-sickening smell of this evergreen I conclude the list of greenhouse plants with sweet foliage.

. INTERESTING STOVE PLANTS,¹ No. 1.

THE mixed stoves of amateurs are too often, like their greenhouses, filled up with plants of ephemeral beauty, like Coleuses, Caladiums, and Begonias, to the exclusion of those of permanent and growing interest.

In a mixed house, be it hot or cool, there will always be cramming and loss of plants, and much time wasted in shifting pots back and forward—for plants are mightily human in their selfish love of the best place, and resent being removed from the hottest or coolest, driest or dampest spot which suits them, but which is required to revive in turn some other favourite plant. Coleuses are notoriously troublesome to keep over the winter in small establishments, and Caladiums take up much room in summer, and cannot be at all crushed. As cramming must be the order of things, let there be subjects characteristic when of small size, and that always repay watching and observing. Of Coleuses let there be a selection of half a dozen of the very best, not merely the “new

¹ *Gardener's Chronicle*, March 22, 1879.

ones of the season ;" and let the same strict rule be adhered to with both the old Rex section of Begonias and of the tuberous sorts, as also Caladiums, Tydeas, Gloxineas, Achimenes, &c. &c.

Following the order noted for the greenhouse—1st, Plants of sweet-scented foliage ; 2nd, those of peculiar growth ; 3rd, ornamental fruit-bearers ; 4th, climbers—I can only name under the first head *Pogostemon patchouly* and *Cinnamomum zeylanicum*. The first is very easily struck and grown. I have never seen the spike of small whitish flowers. Those who dislike the tenacious smell need not touch it, and then it would not be known to be in the house.

A small plant of the Cinnamon, with its glossy ribbed leaves, of a bright rose colour when young, is ornamental, as well as pleasant to nibble at while working in the stove, and it is refreshing to smell if one has brushed past the Patchouly with its overpowering perfume ; and coming out in a winter's day from the close stove into snow or bitter winds, a bit of the astringent leaf is no bad preservative against a sore throat, if one is subject to such. I never throw an old leaf away ; it retains the smell and flavour for any time. *Xylophylla latifolia* and *Reidia glaucescens* both flower peculiarly ; the first on the edge of the so-called leaf, really a flattened-out branch ; the other hanging in a thin red fringe below the edge of its leaves.

Where *Xylophylla latifolia* and *Xylophylla fraxinifolia* are not both grown, the former is surest to flower, and a most attractive plant it is, although one botanically without leaves. *Reidia glaucescens* gets leggy when old; small specimens are therefore best, and it is quite distinct and graceful withal. *Philanthus nivea*, allied to both *Xylophylla* and *Redia*, should also be grown. The mottled white leaves—occasionally they are pure white—are very pretty. It flowers like *Redia*, but sparsely.

Dorstenia is a very singular genus of herbaceous plants. The largest collection I ever saw was Mr. Wilson Saunders's at Reigate.

Dorstenia maculosa, with long heart-shaped leaves blotched with white, is useful for cutting; the peculiar fruit or receptacle is a flat shield at the end of a six-inch stalk; it also lasts long in water, and seeds and increases quickly. Allied to figs, flowers so understood are of course not to be looked for. *Dorstenia lasiantha* is still more singular. Instead of a flat shield, the receptacle is forked, a pair of dark brown out-curved horns two inches long. They catch the eye at once, as also the flat buttons at the tips of each branch of *Dorstenia contrajerva*. This last is a firm little bush of one and a half foot high.

There are between two and three dozen species, but these three are a very fair example of what perhaps, save for microscopic study, is a more curious

than beautiful tribe of plants. They are no trouble to grow, and are free naturally of vermin.

Another set of plants I observe attract my young friends, who are always on the look-out for the present of a Rats-tail; but the *Peperomias* have many of them beautiful foliage.

Peperomia arifolia is a charming little plant, the beauty of the family. *Peperomia maculosa* and *Peperomia argyrea* have glossy smooth marbled oval leaves, six inches long, and the spadix or flower-spike of *maculosa* (Rats-tail) is thirteen inches long and lasts for weeks; seedlings come up in the pots within reach. Then there are tiniest Mouse-tails as in the small growing Saxifrage-like *Peperomia pulchella* and *Peperomia rubella*, with red-stalked bright green leaves—all easily grown and taking up little room.

Aspidistra lurida, although so well known a plant, has its curious flower too seldom observed, and one plant should be kept in the stove until that has been watched and known.

I have often been told that the great drawback of so useful a room plant is its having no flower, and have simply been thought imposing on my friend's superior wisdom, or ignorance, when, on lifting the surfacing of moss, I have displayed the purplish flower growing as it were out of the soil.

The miniature and scarce *Aspidistra angustifolia variegata* is a treasure for a crowded house; there seems no possibility of increasing it. The leaves are

three inches long, and have much white in them. I got our little plant above twenty years ago from the well known Mr. Buckley of Rollisson's, who reluctantly parted with one of his two plants. I am not aware of any soil or treatment that we have not tried with it. We are thankful to have it safe, of exactly the same size, and visions of getting up a stock are at an end.

Marica Sabini is an Iris-like plant, and at the end of one or two of the long leaves, which then hang over the pot, is a nice tufty young plant. The flower, which I have never seen, is beautiful and evanescent, lasting, Iris-like, but one day; but the plantlet swinging about in the air at the tip of the plain ribbon-leaf has a curious look. Strictly speaking, this ribbon-leaf is a runner and a flower-stalk.

Ficus diversifolia has a succession of its yellowish fruits all the year, and plants of even one foot high are useful; the branches, when cut, last long in water, and the thick cuneiform leaf ought to stand, one would think, as well as *Ficus elastica* or *angustifolia*, but we have not hardened it sufficiently or paid attention to that point. I am confident it is our fault, and that it might be a most desirable room plant.

Ficus religiosa is more like a Poplar than a Fig, and its two inches of elongated tip of leaf gives it a distinct character.

Then the *minima* variety of *Ficus repens* (although

it should be placed under the fourth head (Climbers), is not often enough employed.

It is such a temptation to get the back wall quickly covered where nothing will flower (that stumbling-block of the amateur, as if there was no interest in a plant save in its flower), that *Ficus repens* usurps every such space; a portion should certainly be left for the tiny *Ficus minima*, which also does well in a basket; grown in this way, however, one loses the opportunity of watching its root-climbing properties, which, tiny as it is, are very persistent, and it brings down the lime and plaster when detached from the wall.

I presume, therefore, it also, as Mr. Darwin writes of *Ficus repens*, emits a "viscid fluid," which, ultimately modified into an unelastic cement, is used by the *Ficus repens* to cement its rootlets to any surface which it ascends.

I have frequently heard *Aralia Sieboldii* called an evergreen Fig, and perhaps it requires as much faith to believe that between such there is no relationship, as is needful to credit the statement that *Ficus elastica*, *Ficus religiosa*, *Ficus repens minima*, and the Fig of commerce, are of one and the same family. The structure of the fruit is, however, essentially the same in all, great as is the difference in habit and appearance. It is well to grow these half-dozen interesting species, if for nothing else than to prevent oneself flying to mistaken conclusions.

INTERESTING STOVE PLANTS,¹ No. 2.

I ONLY know three plants with perforated leaves—the well known *Ouviranda fenestralis*, or lattice-leaved plant, which requires peculiar treatment not to be met with in the stoves we are writing about, and therefore it is needless to attempt the growing of it. *Monstera deliciosa*, also well known, and far too large if grown for fruit, but a plant in a six-inch pot is big enough for leaves. The holes in these are very marked; occasionally there are entire leaves, and it is very interesting to watch the appearing of the holes. In *At Last*, Kingsley declares that “so fast do they grow that they have not time to fill up the spaces between their nerves, and are consequently full of oval holes.” This passage was quoted to me as a botanical fact, but seeming to my mind rather a poetical licence, I turned up *The Treasury of Botany*, and read: “Monsieur Trécule, who has examined the mode of formation of the holes in the leaves (of *Monstera*), says that they are the result of changes that take place in

¹ *Gardener's Chronicle*, April 26, 1879.

the tissue of the leaf, whereby ultimately the outer skin or epidermis becomes torn, and a hole produced, the size of which depends on the age of the leaf at the time of its formation, and that they have nothing to do with the imperfect development of lobes, as might at first be supposed."

The third plant, *Malortia fenestralis*, is a small Palm of rigid, narrow growth; three feet seems its full size, and it flowers when only one foot high. The leaves are full of slits, more in the style of Ouviranda than Monstera. Room must certainly be made for this interesting palm, which can be raised from the seed it ripens, and the slits soon make their appearance in the young leaves.

I was told at Kew that at certain stages of the leaves of *Victoria regia* there are slits (air-holes) in them, which admitted water.

Of course this is a plant we can only see at botanic gardens, or Chatsworth; and as Kew is open for so many hours every day in the week, there is no difficulty in taking observations of this or any other peculiar plant. It is most satisfactory to see such a large majority was against the early opening of these gardens. I may mention what was my own experience last summer when going with Mr. Goldring from one part of the grounds to another. To save time we went through one of the stoves, and there were detained by a respectable couple, who stopped at every ordinary plant in flower, and at last inquired

of the young man in charge "if he had any mistletoe in that house"? I was struck by the civil answers they got, but as my time was limited by the necessity of catching a train, and Mr Goldring's time was valuable, it was rather provoking to be stopped up in the narrow passages by such visitors; and I could not help remarking that one o'clock was surely soon enough for that class of learners. All must feel their ignorance in botanic gardens, but there are different degrees of ignorance.

To suggest growing a *Musa cavendishiana* sounds rather ridiculous, but although as with the *Monstera*, fruit is not to be thought of, this plant takes up very little room, bears no end of ill-usage, and proves an unfailing source of interest. The long-sheathed leaf, with its strongly defined midrib, and the side ones set at right angles, uncoiling day by day, is a beautiful object. When the plant gets too tall we cut it down, and begin with a fresh sucker again, the whole growth of which is a study.

What we naturally call the stem is strictly a rolled-up leaf; and if one cuts in slices the so-called stem we can unroll the leaf until nothing is left. A young sucker one and a half foot high makes a very handsome single plant for the room, and by generous feeding leaves of large size and of the finest colour and texture can be grown in a twelve-inch pot. But I must own, such over-fed suckers may rot away, while the old starved parent cannot, almost, be

killed, although no justice be done to it for years and years.

A good selection of Pitcher plants will show some of the distinctive properties of this curious genus; *Nepenthes phyllamphora*, which can be kept dwarf by pinching, shows well the coiling of the terminal filament, the chief use of which Mr. Darwin believes is "to support the pitcher with its load of secreted fluid." *Nepenthe lœvis* exhibits the best climbing power, and *Nepenthes maculata* has large spotted pitchers which it produces freely; all three being easily grown and thriving sorts.

There must be a bulb or two of *Gloriosa superba* or *Plantii* grown, not merely for their beautiful orange lily-like terminal flower, but for the curious terminal hook at the tip of the leaf, which can catch hold of a twig and thus support the plant.

"When the plant is young it can support itself, and hooks are not found;" and again, "The leaves on the summit of a full-grown flowering plant which would not require to climb any higher were not sensitive, and could not clasp a stick." Mr. Darwin ends his account of this plant, "We thus see how perfect is the economy of Nature" (*Climbing Plants*, pp. 78, 79).

Although almost hardy, I cannot resist referring to *Mutisia decurrens*, and *Mutisia clematis*, which bear a similar tendril, and which are also peculiar as being instances of the very few climbing plants in

"the immense family of the Compositæ." Mr. Darwin writes: "*Mutisia* is the only genus in the family, as far as I can learn, which bears tendrils."

Mutisia decurrens is rather apt to be lost; first, from its bare, leggy growth, dead-like at the base, and often cut over before prudently leading up three feet or four feet to the young shoots; and, second, the roots run a great distance, and are apt to be cut off in those dangerous fits of tidying up the wall that periodically take place.

We have lost good-sized plants by both of these ways, and also by trying to get rooted pieces of the roots. I feel inclined to say they never root, although you may follow up a brittle runner for a yard and more, neither does it love being confined in a pot—in short, it is a difficult plant to keep unless left alone; but the hooking leaf and fine orange *Gazania*-like flowers are worthy of all care. The flowers last four weeks in water.

The flower of the *Mutisia clematis* is rose-colour, I believe, and good; but I only know it as a complete contrast to *Mutisia decurrens* in foliage. A passing glance would set it down as a Vetch of the fields. This species is noted by Mr. Darwin (p. 117), where he says that "The petioles and tendrils appear to be much affected by the light, for the whole leaf usually sinks down during the night and rises during the day, moving also during the day in a

crooked course to the west;" and "the tendrils retain their sensibility to an unusually late age."

Returning to bulbs, *Amaryllis reticulata* is no trouble, not deciduous, has beautiful pale pink white-streaked flowers in winter, and the deep green leaf has a strong white line down the centre, "correct as if painted with compass and ruler"—a poor compliment, but meant for a very high one by the speaker, an observing workman.

ASTERS.¹

I DO not know how people do without blue in their borders and flower-glasses at this season, but certainly one does not see the herbaceous Asters grown as they ought to be in every garden; and as they are of all heights, from half a foot to five feet, varieties can be introduced in every row of the mixed borders.

There seems to be great confusion or want of interest in having these Asters correctly named, and as there are above one hundred varieties in cultivation it is puzzling. I enclose specimens of ten we find the most free flowering, and ornamental for both out of doors and cut flowers, and I should be very glad to have their correct specific names. The *Hypericum* has been in bloom for three months, and from its graceful habit and delicate foliage is a very attractive bush even before the lovely little flowers expand.

Artemisia annua is very useful at present, when grasses and umbelliferous plants are over for tall glasses.

¹ *Gardener's Chronicle*, November 16, 1872.

BARBAREA VULGARIS, FOL. VAR.¹

THE enclosed plant, *Barbarea vulgaris*, fol. var., is, I presume, the *Nasturtium officinale*, var., alluded to by Mr. W. Gardiner at page 450. We have used it here for eleven years for the winter garden, and first picked it up in a nursery garden at Dunse, Berwickshire.

Our plan is to grow it in some out of the way place, where it seeds freely, and we then are able to select seedlings of various or equal sizes for the winter beds. As *Arabis lucida* var. does not flourish here, we find this crop most useful for winter; it is earlier than *Sedum acre aurea*, or the Golden Feverfew.

A bed of East Lothian Stocks, carpeted and edged with the Variegated Cress, looked remarkably well all autumn and early winter until the Stocks were spoilt.

We do not consider it ornamental when flowering and seeding.

¹ *Gardener's Chronicle*, April 22, 1871.

FUCHSIA RICCARTONI.¹

Miss Gibson Craig answers my inquiry, as to the origin of *Fuchsia riccartoni*, as follows :—

“It was raised at Riccarton (near Edinburgh), I should think certainly above forty years ago at least, by our then admirable gardener, John Young. One parent was *F. globosa*, but which the other was I do not know.”

On the east coast here we never require to protect it. It grows to the top of our sea wall, ten feet, where the spray occasionally comes over in easterly gales ; and we also grow it in our autumn border as bushes two and a half or three feet high.

The wall plants were cut down like the Myrtles in 1860-61, but this year it has not suffered above seven feet from the ground, as far as we can yet judge.

¹ *Gardener's Chronicle*, February 20, 1875.

LEAVES FOR DISHING-UP FRUIT.

I HAVE no experience in leaves for "dishing-up fruit," but the miniature palm-like leaves of *Helleborus foetidus* have not been named by your correspondents.

The plant would sow itself in any wild shrubbery or open wood. There is also the *Heuchera*, than which no leaves stand longer, and, especially when the light shines through them, they are very beautiful. Both the *Heuchera* and the *Hellebore* have firm clean footstalks convenient for the above purpose; both are perfectly hardy, and to be had all winter, thus saving indoor plants.

GOOD KINDS OF WALLFLOWERS.¹

IN the list of Single Wallflowers (see p. 390, May 9, 1874, of *The Garden*), I see no notice of a very dark variety, spikes of which I now send you, but not the best, which are for seed. It is the only Single Wallflower which I grow, and it has been kept true here for above fifty years. I must own, however, that common streaked yellow and brown, or the wild dwarf sort of Wallflowers, have much more perfume than this dark kind; nevertheless our garden is well perfumed by it. We have lost a double dark variety as black as our darkest single, which I got long ago at Penshurst (Porter's Lodge), and remember about Tunbridge there was a very good double variety in all the little gardens, not so black as the Penshurst one.

The small double yellow (of which I also send blooms) flowers for ten months; it expanded the first week of February this winter, and is invaluable. We got it from Mr. Harpur Crewe.

¹ *The Garden*, May 30, 1874.

HANGING BASKETS OF HARDY PLANTS.¹

INSTEAD of using moss to line our wire baskets, which, of course, turns brown before the basket-plants have got established, we use living varieties of Sedums and Saxifrages, which grow, flower, and look and last well. Those I had employed for carpeting the winter beds came in very handy, as they were in sods large enough to line the basket in one or two pieces. *Sedum lividum*, and *Sedum glaucum*, and *Saxifraga hypnoides*, look particularly well; but no variety that I have yet tried has failed. My gardener, following up the idea I had got at a neighbour's, suggested our trying a basket with *Sempervivum californicum*.

Of the result you can have an idea from the enclosed photograph (see Fig. p. 52), and the rosettes are firm, and will soon form a solid mass if left alone.

Next time the baskets are overhauled I shall try other Houseleeks, which certainly are not out of place above one's head, and do not suffer from the draughts, dryness, and, to speak plainly, the neglect or forgetfulness that hanging baskets are peculiarly exposed to. I believe every one is tired of the everlasting Ferns, Ivy-leaved Geraniums, Lobelias, and Tropæolums, which have for so long constituted the furniture of the greenhouse hanging basket.

¹ *Gardener's Chronicle*, January 11, 1873.



The following plants I have never yet employed for this purpose:—for centres, *Echeverias*, of sorts, and *Carex japonica variegata*; trailers—*Enothera prostrata* (?) *riparia* (?) is lovely, and its delicate yellow flowers contrast well with either *Nierembergia gracilis* or *Convolvulus mauritanicus*. *Fragaria elatior muricata* is excellent, and has flowers and fruit hanging all the year.

The smallest leaved Ivies, both green and variegated, *Marmorata*, *Cavendishii*, *Rhomboides*, &c., look well, but are stiff trailers in comparison to the strawberry or a species of *Smilax* (?) that I have used for many years, but never have got its name, as it has not flowered. I found it at Dickson and Co.'s Nursery; its history they knew not, and it was of no use to them. I have only seen it once at another nursery here—Drummond's. The sprays are very useful for mixing with cut flowers; and for that last purpose allow me to name *Pittosporum mayi*, an almost hardy and too little known ever-green shrub—the black *Adiantum*-like stalks and beautifully-veined leaves of a peculiar shade of green make it most desirable.

Linaria cymbalaria variegata is so difficult to grow, that we have enough to do to keep it under our eye, without risking such a pretty little trailer in a basket—with the variegated form of *Sibthorpchia europea* it would make a very nice pair.

Another plant which may be most usefully employed, though its flowers are not at all conspicuous, is the not commonly met with *Menispermum canadense*, for its fine distinct green colour looks extremely well when it is planted so as to alternate with the variegated Vine or Vincas, or the little round light green leaved *Rubus australis*. This Bramble is remarkable from its peculiar appearance.

The common double yellow *Potentilla* is very useful, also the variegated form of *Glechoma hederacea*; but I want particularly to draw attention to the centre plant in the accompanying sketch, although it is not a hardy one. I got it years ago from Germany, but have only seen it in this country at Mr. Salter's, Hammersmith, who gave me its name—*Cordyline vivipara*, or *Chlorophytum sternbergianum*. It is a plant I have never yet been able to kill, and for an amateur's basket plant that, perhaps, is its highest recommendation. It flourishes in a moist stove, a dry greenhouse, and in Germany it hangs around the metal stoves in the double-windowed, gas-lit, airless rooms. It will not do out of doors. I am not acquainted with any plant that is more varied in its growth and habit at different stages, or when in divers situations; and I think it would become as popular as the *Lysimachia* or "Hanging Jenny" Saxifrage, if once it were introduced into Covent Garden.

The Chlorophytum has a further interest in being associated with Goëthe, who found the plant in the Grand-Ducal Gardens at Belvedere, near Weimar, and wrote about it to Professor Nees von Esenbeck, the then President of the Academia Leopoldina Carolina, as follows:—

“WEIMAR, April 2, 1828.

“Although it is not permitted to me to let my eyes dwell on beloved Nature, and least of all on seductive botany,¹ still I have always some representatives of the world of plants about me, and just now I have a small plant of which I desire to learn more. Some of its blossoms are lying dried between the folds of this packet. The bunch of leaves out of which the stalk on which grow the blossoms develops itself, cannot deny belonging to the Lily family, and our garden friends seem only to waver between *Anthericum Liliago* and *Herreria*. To myself it is particularly interesting on account of its extraordinary prolific habit, which unfolds before our view the whole life of a plant. It produces a pendulous, thread-like stalk, on which grow the six-leaved florets, at first sparingly, and anon more and more abundantly, closely together, till at last they appear twisted together, and finally combine to produce a new bunch of leaves. When they are grown together the leaves are slightly glutinous and onion-like, and, whereas the leaves tend to grow upwards, there are underneath them small warts which seem to dry up when exposed to light and air, but which, under the favourable circumstances of a moist neighbourhood, develop themselves into aërial roots, upon which the suspended plant forms again thread-like stalks, and so on *ad infinitum*. These appear, therefore, to be aërial offshoots (stolons), the uniting threads of which blossom, however, and no doubt, where they are at home, bear fruit. If such a bunch of leaves, with its aërial roots, is put into earth,

¹ On the same day he declines to undertake the publication of a new series of his Investigations on Morphology.

a peculiar phenomenon occurs—these aërial roots again strive to rise out of the ground to air and light, swell to a larger size, but return with their ends back into the earth, become thin, and dwindle down into the finest of entwining threads.

“Now, how deeply I have been interested in comparing this plant with the old *Dracena draco* described by you it is easy to imagine. Outwardly is found the widest contrast as to corporeal expansion and duration of life, but inwardly the most decided relationship, for it, too, is said to produce those little flowers like asparagus blossoms, and from it, too, shoot off (or separate themselves) in a manner, living plants, and a vegetable tower must acknowledge the kinship of a tobacco-pipe tube!”

Nees, on communicating this letter in the *Nova Acta* of the Academy, vol. xv. p. 2, 1831, accompanied it with the following remarks:—

“This letter gave me the first intimation of the existence of this interesting plant. At a later period when I saw it in full bloom in the Grand-Ducal Garden at Carlsruhe, under the name of *Cordyline vivipara*, I was struck with its resemblance to *Anthericum*, and still more with the strangeness of its appearance altogether.

“The kindness of my friend the garden inspector, Hartweg, of Carlsruhe, enabled me to investigate minutely this flowering plant; and as it was hoped just then that Goëthe would honour with his presence the assembly of naturalists at Heidelberg, I prepared my memoranda for this purpose.

“But since then Professor Schultes has given us the first public notice of our plant in his *Systema Vegetabilium*, which appeared at the close of the year 1830, but which I did not see till the spring of 1831, and his quotations lead to the conclusion that he drew his knowledge from a manuscript dissertation of Count von Sternberg.”¹

¹ The celebrated author of the first German Essay of a *Geognostic-Botanical Description of the Antediluvian Flora* (Prague, 1825).

These words leave no doubt that the plant described by Count Sternberg is the same Goëthe had had before his eyes. The Cape of Good Hope is supposed to be most probably its native country. The "trivial name" (*Comosum*) given it by Count Sternberg had to be changed, as an *Anthericum* of this name existed already, and therefore the editors of the *Systema Vegetabilium* graced our plant with the epithet "*Sternbergianum*."

These historical facts must be taken into consideration, as they prove that we have not recorded Goëthe's remarks without ground, although Count von Sternberg had undoubtedly the merit of having been the first in classifying and naming this plant.

NOTE.—BASKET PLANTS.¹

The Article which you printed in your last issue (p. 40) was written some time ago. I have since ascertained that the *Smilax* I mentioned is *Myrsiphyllum asparagoides*. The small, round, light-green leaved *Coccoloba* is *Coccoloba vespertilionis* (?); the *Rubus*, *Rubus australis*, a very curious plant, almost destitute of leaves.

¹ *Gardener's Chronicle*, January 18, 1873.

WINTER ASPECT OF TREES.¹

WINTER is the best season for studying the two extremes of vegetation as regards size—Trees and Mosses. I have often been laughed at for stating that forests and parks should be visited when the leaves are off, as then you can see and know the trees, both evergreen and deciduous; and I seldom meet with a cordial companion for my winter and very early spring excursions.

It is a sadly superficial knowledge of trees to know them merely by their leaves; and one frequently meets with those who confuse, in winter, the Beech with the Lime, the Alder with the Birch, and the Sycamore with some other round-headed tree. We should be able to name at once a tree from its bark and buds, and from the bare (always beautiful) outline of the whole tree.

Leaves entirely conceal the beautiful and varied way in which the branches and sprays grow (different in every species of tree), which come out so distinctly against the winter sky, a piece of water, or the snowy

¹ *Gardener's Chronicle*, February 22, 1873.

side of a hill. Then the colours of the different barks, both of trunks and young twigs, are brightest in winter (or appear to be so), not taking into account the endless patterns and stainings of the Lichens and Mosses, which are almost always finest on the north side of the tree (a fact useful to know when wandering about in a strange wood).

We have warm red in the bark of the Scotch Fir, the Sycamore, and the twigs of the Lime and Maple; pure white in the thin outer covering of the bark of the Birch; and the smooth grey of the Beech contrasts strikingly with the spirally-growing rough bark of the Spanish Chestnut.

In the Willows we have rich gold, yellow, red, and purple, which last colour is best found in the small branches of the Alder and Birch. The bark of all the Planes, for peeling off, and *Acer striatum*, beautifully streaked with white, are very interesting; but they are more ornamental trees, and it is the everyday trees that are everywhere found that should first be known.

Then again, unless we go among the trees in winter we miss seeing many of their flowers—Elm, Ash, male and female catkins of many varieties of Willows, the Hazel;—and see that the little female flowers are not overlooked. If not found in the first tree, go on to the second, or third, until found; they are earlier, and of a brighter red than the Larch flowers. Birch, Poplar, Alder, and *Alnus cordifolia*, are all

interesting, with their catkins,—the Alders particularly so, from having this year's catkins and last year's fruit hanging together.

These I believe are the earliest of flowering trees, but all should be watched for in succession, even insignificant flowers like those of the Oak and Beech.

There is no fear of the Horse Chestnut, the Sycamore dripping with honey dew, or the delicious Lime being passed over, even although their tantalizing leaves may be fully developed.

Four advantages, it occurs to me, may be gained by the winter study of trees :

(1) One can learn much even without stopping, when travelling by railway or carriage, be the trees deciduous or evergreen.

(2) If walking one must look up, and then there is a chance of one's looking at the clouds. It is wonderful how seldom people study the sky unless for a sunset or thunderstorm, or to see if they must be "bored" with their waterproof and umbrella; and much do they lose by not observing the massive forms and shades of the snow or rain clouds, or the endless shapes and motion of the little clouds on a breezy day in early spring.

(3) When the trees are bare one is able to see the small birds, particularly those that hunt on the bark for their food. The Titmouse, of sorts, hanging upside down, running round and round; the little Creeper, which one is apt to take for

a mouse, running up the tree; possibly the red-headed Woodpecker, and Jenny Wren, with her little tail at right angles to her back, singing loud enough for a bird thrice her size; sober hen Chaffinches in companies, wondering when their gay plumaged mates will rejoin them from Sweden; and many others, invisible in the "greenth of July," as Horace Walpole writes of that depressing month which he so disliked—and I rather think he was right in doing so.

(4) Nearly the whole tribe of Cryptogamous plants are in perfection in winter, and one cannot resist stooping down to examine the Liverworts and Mosses in full fruit, silver "fairy cups" tricked with red fungi, the beautiful scarlet *Peziza cyathoides*, and others too fragile to touch, on rotten sticks on the ground, or like *Boletus* growing by the pound weight high up on a living tree. The Mistletoe is also to be seen in winter.

But I fear these advantages will not tempt people to set off in the short days to make excursions to "woods and forests;" but perhaps they might be prevailed on to visit the nearest Tree Nursery, and there they will have the readiest means of studying the trees from their seed-bed to the age when perhaps some of them have acquired their peculiar character, as far at least as to the way in which the branches grow (different in every species of tree), and can thoroughly learn to know the tree by the shape and

position of its bud, flower, and leaf, including the dead leaves, which are different in every tree, and by the distinction of flower and leaf-bud.

The bud of the Ash is as like Ebony in the seedling of six inches as in the tree of sixty feet; those of the Horse Chestnut and Balsam Poplar as resinous, the Lime as round and red, the thin-leaved Beech as sharply pointed, and the heavy-leaved Sycamore and Walnut have their fat green buds exactly the same in the seed-bed as in the forest tree, and those of the Mountain Ash are as wide apart and of the same soft lilac.

The Elm, Willow, and Birch, have small leaves, and one expects small buds; but the Spanish Chestnut, although so large in the leaf, has a small bud, as also has the Oak. Hornbeam and Beech, so often mistaken for each other by the leaf, could never be confused if compared in the bud. All these bud distinctions can be learnt conveniently at the nursery garden, quietly going round by oneself without taking up the foreman's time, which, if you have no intention of purchasing the trees you are studying, it is not fair to waste, any more than a shopman's; besides, information groped out by one's own observation is much more surely imprinted on the memory.

My two last tree excursions were to Burnham Beeches and to Wotton. The rising generation are not brought up on quartos, and never open Evelyn's *Silva*; but it was from that charming book I first

learned to observe the red shoots of the Lime, which he recommends "to be planted for avenues, &c., and to make a variety in places designed for relaxation of mind. Although the leaves fall off very early in the autumn, yet it immediately makes amends for this by exhibiting its beautiful red twigs, for which reason the red-twigged Lime should always be preferred for these purposes." I was determined to visit the trees he wrote so lovingly about at what I shall always consider the best season.

Burnham Beeches we should never have seen had the leaves been out, for we stopped at Cliveden and Dropmore *en route*, fortunately finding Mr. Fleming and Mr. Frost, and, I need not add, being courteously received and shown round by both; and our train being fixed, it was a gallop and scramble to the Beeches. However, I hope to revisit them and to complete the English forests and parks I have not seen—above all, to study again and again Scotch Firs in the Forest of Rothiemurchus, for instance, and Birches in Perthshire. These two trees, finest when self-sown and self-pruned, are surely the first for grandeur and grace, the darkest and the lightest; at all seasons, characteristic themselves, and bringing out as no other two trees can do the character of all other trees; always picturesque, and not absolutely requiring man's care.

With these two trees I shall conclude, for this

season, these superficial remarks on the winter beauty of trees.

Where any branch of natural history is concerned, "a little learning is 'not' a dangerous thing;" it must at the same time elevate and humble the mind of the smattering amateur and the learned professor. Any way, Pope is no authority where Truth and Nature are concerned.

ON FLOWERS OF TREES.¹

THE importance of studying "deciduous trees in winter," so as to learn the distinctive "disposition of the branches and arrangement of the sprays," was well explained by Mr. McNab, in his paper on this subject read before the Botanical Society of Edinburgh.

I should like to press the subject one step further, and suggest that the early-flowering trees should have the first consideration in planting, particularly in town squares, villa gardens, and other small places, where each individual tree must be thoroughly known and valued for its distinctive character and qualities.

It is delightful to watch the thickening of the branches in early Spring, and that is more marked in the case of the flower than of the leaf-buds. For example, a group of either Scotch Elm with its round buds and bunches of inflorescence, or Alder with its long purple catkins, in a park, gives a decided colour and thickening to the landscape

¹ *Gardener's Chronicle*, April 17, 1875.

very early in Spring. But the various Willows are the first flowering trees. *Salix violacea*, *purpureascens*, *coerulea* (under all these names is it sold), is the earliest of all, and has a beautiful, large, soft green catkin, which, however, seldom grows to the end of the twig in Scotland, unlike the well-known *Salix caprea* and *cinerea*, which flower thickly to the very tips of the branches. The male flowers of *caprea* are particularly striking when not fully out, and the one side of the catkin only is ticked with the bright red anthers, soon bursting out into full yellow flower.

Salix caprea is somewhat later, but is very attractive, while the white catkin is still half-enclosed in its round shining brown husk; and plants of about five or six feet high are in February very useful thickly studded with flowers, and of a compact, tidy, erect growth, for the shrubbery. *Salix viminalis* and its varieties, with long and remarkably soft white catkins, is another early Willow.

Salix rubra, with prettily marked purple catkins, very like *Salix helix* (true), comes about the same date. *Salix nervosa*, sent to me in February by Mr. Scaling, is another, with rods a perfect mass of grey catkins. *Salix tomentosa*, is interesting from the brown leathery clothing of the ends of the branches and husks of the rather coarse grey catkins.

Salix kirkii, *lambertiana*, or *purpurea*, is another purple-catkined Willow, the flowers of which are long and narrow.

Salix aurita is quite distinct, and were it not for the round white catkins budding out, one would fancy it a Beech, from the hard, wiry, brown twigs. I find all these Willows with early catkins do well in water. The male *caprea* flowers are very interesting, and by removing the husks at different stages a great variety of shades of soft green and rose are brought out, which we do not find when the twigs are left alone on the tree. I should much like to know what mode of pruning (if any) would secure yearly a fine crop of catkins. Hot summers we cannot command, and I do not know if Willows are as dependant as other flowering-trees on well-ripened wood. They have been very late this severe winter, both here and in England, but the catkins do not seem to suffer materially from sudden checks.

Writing to Mr. Scaling on this question of pruning, he answers—"The lower branches of Willows do not flower so profusely as the upper; when the lower branches are cut close back, leaving the upper ones untouched, the flowers are finer and fuller;" he "is not prepared to say how far a tree would be permanently injured for flowering by a judicious pruning back at any given time. Certainly it would not flower to any extent the season it was pruned."

That the trees are most vigorous the third and fourth year after being cut in for nursery purposes (in which no heed is taken of the flowers) is a fact; and that where an undergrowth of colour (red, yellow, or purple) is wanted, a yearly cutting down ensures the greatest quantity of brightest young wood (as with Dogwood and Buckthorn) is another fact; but for catkins would it be wise to have three specimens of each early-flowering Willow, to make sure of having one in perfection every year, pruning in yearly rotation one of the three? One example of one species is, of course, no rule; but we find that a stock of *caprea* (eight feet high), the grafts of *Salix argentea*, *lanata*, *chrysanthos*, on which had died, flowers yearly thicker, growing naturally.

It would be well if all gardens were provided with a few stocks (*caprea*, male and female, nursery men consider the best) for grafting, budding, or inarching such Willows as succeed best that way; one year is safe for budding, two years for the other methods. We lost our *argentea* by having it taken too soon from the parent tree. It is an interesting Willow, from its very silvery catkins which grow at the tips of the branches.

The Kilmarnock Weeping Willow is at present a very interesting object, well covered with white catkins.

To plant trees that flower before they come into

leaf is, I am certain, an object well worthy of consideration for landscape effects, and trees for garden boundaries; the cut twigs of such for indoor decoration are very interesting.

I find the Willow catkins that come out with or just after the leaf do not last in water; possibly no tree-flower does at that time, as the young leaves are sure to flag; but the Lime, from being later to flower, does stand.

In several of the squares in Edinburgh the flowers of the Aspen are very thick when seen against the sky; when faded and strewn on the pavement they are wondrously like the cast-off skins of caterpillars. But I was struck by the effectual blind a group of three trees formed (Aspen, a Scotch Elm in flower, and a Laburnum still loaded with its bunches of seed-pods), quite concealing an ugly row of houses opposite the street.

The prominent female flowers of the *Populus balsamifera* (Balsam) are now also very striking, yellow ticked with red, contrasting well with the soft, fluffy, red and grey catkins of the Aspens (two varieties). A group of either tree in March is valuable. Another curious Poplar catkin is *Populus polonica* (a continental Aspen) with green and black ticked flowers, all curved in and hanging on one side of the twig; but this Poplar does not grow to the size of a forest tree.

There is a very common idea that the *Populus*

tremula (Aspen) is the only Poplar that quivers; the *Populus alba* (*Abélé*, Dutch Beech, downy Poplar), that has a white leaf and peculiarly marked trunk, and the *Populus balsamifera* (Balsam) the only sweet-scented ones. All have more or less slender foot-stalks, compressed vertically, which causes the quivering motion, and there are at least nine or ten white-leaved Poplars.

To judge alone by the white bark, with its triangular-toothed scorings of the upper part of the trunk, it would be difficult to decide if the tree were an Aspen or an *Abélé*. Both the *Populus monilifera* (Black Italian Poplar), and the *Populus candicans* (Ontario Poplar) are sweet-scented; this last is also white-leaved.

I do not know if it is the climate or that greater attention is paid abroad to propagating from the very whitest variety, but certainly the *Abélés* one sees in ornamental avenues on the Continent are far more striking than ours when the breeze turns over the leaves. An avenue of Planes (*Occidentalis*) and *Abélés*, even although pollarded, as they so frequently are abroad for shade walks, look very well; and in another town Mountain Ash in full fruit was added to these two trees. The Alder in March is no longer purple as is the Birch, but is yellow in the landscape, like the Hazel, with its long unfertile catkins ticked with purple, and the little puce-coloured fertile ones, like miniature cones, are

hardly noticed, and require to be sought for, as do the crimson female flowers of the Nut; they are set at the end of the twig in groups of three or four,—in vain have I searched for a set of five. With the exception of the Larch and Ash, the flowers of the other forest trees are too late to be of use for winter effect. Few ever think of looking for the queer flower-spike of the Walnut or those of the Spanish Chestnut, although the fruits of both are very welcome and sought for; indeed I have been told as a fact, that Horse Chestnuts and Limes are the only forest trees that have flowers!—my informant having seen the former in Bushey Park, and having often been overpowered with the fragrant perfume of the Lindens.

Mr. McNab's opening remark, that "there are people who are utterly incapable of discriminating between the various kinds of forest trees when bare of leaves," may be extended to a complete inattention to and ignorance of their flowers.

As the power of observation (far less the habit) cannot be acquired in one season, and therefore deciduous trees will not be distinguished after one winter's walks, I would recommend that the page containing Mr. McNab's distinct description of the various trees be carried for reference in the pocket until thoroughly mastered.

There is such complete confusion among the names of Willows, each nursery having its own,

that possibly the best plan for those who would wish a collection of these Willows with early and interesting catkins is merely to give such an order to their nurseryman, or, better still, to go round and mark at the various tree-nurseries those they fancy. I find myself frequently answered with "We have never paid attention to the flowers of Willows and Poplars—they are not grown on that account." Now I think that they should be, for their catkins alone, as well as for their very many other valuable properties, all planters being alive to Willows and Poplars bringing the quickest return of any timber tree; and for many years that will increase, unless our railway carriages, like our ships, are turned into iron ones; also for their great diversity of growth (the large *Salix russelliana* at Sion is eighty-nine feet high, and *Salix herbacea*, crawling on the ground, is our smallest forest tree, and is four inches in height); and for their power of growing in all situations, swamps and mountains, the Willow being the last woody plant we met when climbing a mountain.

Of all varieties of habit, erect, weeping, always graceful, and of distinctest colours in bark and leaf at all seasons, yet nevertheless the flowers of Willows have been comparatively overlooked in ornamental planting.

Were the popular belief proved that "the more prominent kinds of Willows have hybridized and

yielded intermediate varieties without number," causing this genus of plants to be more confused than any other (vide *Aboriculture*, Gregor, 1868), a skilful hybridizer might possibly utilize this confusion, and we might have additions to and improvements in our stock of early-flowering trees on whose flowering we could with certainty count, and at a season when they would be most seen and valued. Then, indeed, would the Willow be in all senses a pliable tree. Mr. Scaling writes in his *Series of Papers on the Salix or Willow*, Part ii. p. 8, "Referring to a register kept in the Basford Nursery, in 1871, of nearly 300 varieties of Willows, 92 were in flower and 115 in leaf on March 25th."

That our native species are not exhausted is proved by the discovery of *Salix sadlerii* last summer by Mr. Sadler.

I observed last November, for the first time, in Mr. Robertson's Nursery here, the flower-buds of *Salix violacea*, which were then of a bright rose colour; but Mr. Robertson told me that this depends on the season, and it is not invariably to be counted on.

FLOWERS FOR THE POOR AND THE SICK.¹

“This is an art
Which does mend nature : change it rather : but
The art itself is nature.”—SHAKESPEARE.

THERE is at present in many directions a strong movement for giving plants and flowers to the poor in their homes and hospitals. On reading appeals for supplies of flowers, I am struck by the omission of demands for winter flowers,—it is always for summer; sometimes spring and autumn are included, but one would think that infirmary wards were empty in winter, that disease and death were not so rampant at that season, and flowers were not needful to help to purify the close rooms in the long dark nights. The present is a good time to make provision for winter flowers for the sick; and allow me to explain that in my limited experience among the town poor, anything green is considered a flower, and any flower is a rose. There is no garden so small that it cannot hold a few plants of Thyme and a bush of Rosemary; nor is the stock in any private

¹ *The Garden*, June 7, 1873.

garden large enough to supply even one district or hospital with these two wholesome aromatic plants. I would include Lavender, but it must be saved in winter for its flowers in autumn.

A "beautiful smell" is more prized by the poor than even a beautiful sight. The prejudice against flowers in sleeping-rooms is many degrees stronger among the upper classes than among the poor. I pass along to my own room and see the flower glasses of my friends carefully set outside their doors, or on the window-sills, for the night,—“no sleep and a headache in the morning” being asserted as the certain consequence of sleeping in the vicinity of any and all vegetables.

In my own room there are plenty of the flowers in season at the time, and below the window there is a hedge of Sweetbriar and Honeysuckle, and a border of Stocks, Mignonette, Sweet Peas, Lupins, and common Roses, a bush or two of Lilac, and not far off a fine Sweet Bay; thus I cannot escape the smell of flowers, and yet have lived half a century in ignorance of headaches and sleepless nights.

To resume: growing a market-garden supply of Thyme and Rosemary for our winter beds, we have been in the practice in spring, when these plants were removed, and after our own supplies for the next winter are taken up and laid by, to distribute what we can spare. We could not supply pots for such a number, nor would the additional weight have

been convenient for our benevolent kinswomen who distributed the plants at their "mothers'-meetings." We therefore selected the most retentive soil there is in our light ground, and kneaded it around each clump. This answered the purpose perfectly, and did not offer the temptation of selling the pot. It occurred to me this winter that we should not wait until spring to give plants, but that a whiff of health and pleasure might be administered by sending out Thyme and Rosemary to the Royal Infirmary, made up in little bunches, with one Christmas Rose or two or three Snowdrops in each. Our kinswomen were again only too happy to distribute weekly these flowers through the wards open to visitors. Our many dozens (now amounting to hundreds) went but a little way, alas! but the pleasure they gave cannot be told. From Snowdrops we progressed through Heath (*herbacea* and *carnea præcox*), Crocuses, Dwarf Daffodils, Grape Hyacinths, Arabis, Polyanthuses, white and red Ribes (one raceme sufficient for each), Stocks that had stood the winter (one head gave colour), Laurus-tinus, Sweetbriar, Spearmint, and Balm, until the month of May, when everybody can help easily with a host of spring flowers.

But however ample supplies from this garden may become (we sent 400 one day), two points will be all-important.

1. That every nosegay, be it no larger than a

"button-hole," shall have a sprig of a woody aromatic plant, that does not require to be kept in water to remain alive and sweet, that will neither stain nor litter the bed, that can be crushed under the pillow and sniffed at through the long night, and be still pure and sweet in the morning, and, like Lavender when thrown away into the fire, will "E'en in its ashes, live its wonted fragrance"—as Rosemary, Sweet Bay, Thyme, Lavender, Southernwood. I name them in perhaps their most useful order.

Point 2 is, that all flowers should have been at least an hour in water before being sent away. Unpractised people have a notion that flowers fresh from the garden must be best, and are suspicious of those that they feel have been in water. All who work practically with cut flowers know that this is an utter mistake. Even in cool weather, flowers sent from here (twenty minutes) to Edinburgh would arrive limp and short-lived if fresh from the garden, but crisp and firm, had they been placed in water for a time. One cannot expect in a hospital that each patient is to be provided with a little mug of water to hold the flowers; there may be one general dish in the ward, where all the little bunches are put. I do not know as to this, therefore I would secure the dry clean sprig, that entails no trouble on the nurse, nor gives grounds for complaint of wet or mess.

I have frequently heard philanthropic people say that we ought to give our best flowers to the sick poor, that there ought to be no grudging where gifts to the poor are concerned; by "best," these talkers mean scarce and rare flowers, the actual value of which (not to speak of the cost in growing and keeping them), would have gone far to provide food and fuel for those who, for want of these, have been struck down with sickness and are inmates of the infirmary. What healthy associations can the poor have with hothouse or rare border flowers? Why should they not be considered, and have the strong-smelling herbs and the flowers they know, and to which some memory may be attached? A memory is a fact, not a sentiment, and sentimental people would thus deprive the poor of their own simple associations. In our ugly and utilitarian kale yards, there is almost always (and for it only) still room for a bush of Southernwood.

I am glad to see it, and again I repeat, Why should the infirmary sick (people often from the country) be deprived of the sprig of "Old Man," with possibly its Sunday memories, because we are accustomed to more "refined" plants and smells?

All sorts of Mints, Costmary, Balm, and pot-herbs are prized and preferred. We had lines and plots of these prepared in early spring, to save the Thyme for winter.

Sweetbriar we put into the centre of the bunch

(or fold a leaf of Sweet Bay sprig round the stalk) to protect the poor sickly hand from the prickles; the topmost spines are too soft to hurt the nose. A long branch of Rosemary, half a yard long, may be cut into lengths; but see that the stalk is cut down close to the topmost pair of shoots in each length, so as to guard against sharp points. Worsted makes the best tying material; short ends, and old unravellings that would be wasted, are yet strong enough for these little bunches. They must be firmly tied; yet not too tight, else, if put into water, the stalks cannot benefit, although worsted is a safeguard there.

A handful of earth seems a thing to be had anywhere. Arthur's Seat is ten minutes distance from the Cowgate, but for all that mould cannot always be got by the poor in garret and cellar. For such contingencies I would suggest a bunch of Spearmint, which will grow and root in water. An additional motive would be, that a top, or two or three leaves, might give a flavour to some little mess that may sometimes be procured. Failing earth and water, I would still urge having a plant; and Houseleeks and Stonecrops, if there is a skylight or window at all, would live on nothing.

Here again there might be a combination of use with the pleasure of having the plant. A leaf of Houseleek (*Sempervivum tectorum*) is a sure allayer of inflammation and "ills" that feet are "heir to." I

have sent by post leaves to those who could not afford themselves the relief of a chiropodist, and have been told that they assuaged the pain as nothing else did.

The plants I have named can all bear crushing. A hamper of Rosemary and Thyme, Houseleeks and Sedums, from the country, could be tightly packed, and arrive not a bit the worse, even if delayed on the road.

I hope these suggestions may be followed up by some of your readers. For ourselves, we intend to make winter our "supreme effort," and hope to be methodical, and use foresight in carrying our plans out. In summer there are always country friends now and again coming in and bringing a nosegay with them for the poor inmates of the infirmary, and bunches come from the market then also occasionally.

FLOWERS FOR THE BLIND.¹

It is more than a year since I made some remarks on "Flowers for the Sick and the Poor," and the "Flower Mission" is now a regularly organised system in this and other towns (*vide* Miss Stanley's paper in *Macmillan's Magazine* for April last).

Still, I have not observed any particular notice of the Blind; and for this past year we have taken our supplies regularly to the Royal Blind Asylum, the manager informing me that no one had, as yet, thought of sending them flowers; and very much pleasure have we given during these twelve months to the inmates of that Institution. Of course, for such an object the supplies are limited to aromatic and sweet-smelling plants, of which at present there is abundance—Roses, Pinks, Stocks, Honeysuckles, and woody plants, Sweetbriar, Southernwood, Walnut; but the dry season has never let our Herb beds, grow and we have had to fall back upon our winter Thyme and Rosemary, this last being the most unfailing and surest for all seasons and weathers. A hedge should

¹ *The Garden*, July 18, 1874.

be formed of it in gardens that are intended to regularly supply the blind, sick, and poor, also one of Sweetbriar. We had the border forked and loosened about the Sweetbriar, and gave it a thorough soaking; the Rosemary, on the other hand, which backs a succulent border, is enjoying the hot sun and gives no trouble.

I will name some plants that have given the Blind pleasure, and which may not occur to those who have not tried and succeeded in making a variety in their supplies every week in the year, to those deprived of the sense of sight; also the various shifts I have been put to, and the assistance I have had. There must always be a difficulty in supplying a sufficient quantity of any particular thing at the scarcest season, when one is dealing with a large or even a small public institution. For instance, it is not fair to go into a work-room containing eighteen or twenty Blind workers, with only a dozen Narcissus, Polyanthuses, or Hyacinths; and yet that number will probably, clear off the whole supply of an ordinary greenhouse for one week. Our worst time occurred when the Snowdrops were over, and before sufficient Primulas of all sorts had come on (Violets, Primroses, Lily of the Valley later on, and Jessamine last of all, were four plants we could not attempt at all), and for two or three weeks we were reduced to Sweet Bay, Rosemary, Lavender, and Thyme.

One is often startled by such remarks and questions

from the Blind, as these: "I saw Crocuses yesterday, but they have no smell; Snowdrops are sweet!" and "What is the colour of the flower?"

At the time of the Duke of Edinburgh's marriage they had all been out to "see" the illuminations, and were eloquent in their descriptions of what they liked best, one admiring the Castle most, another a Bank, or Church. On applying to our two principal nurserymen I was at once most liberally supplied (one week from each), with sufficient Hyacinths and Lily of the Valley to go round the room we usually visit, and the workers in which were highly delighted, each sniffing at a fine Hyacinth, and carefully going over every bell with their fingers (they always touch before they smell). The Lily of the Valley was an immense treat; all knew it by name and idea. Forced flowers for an Asylum are quite out of the question, and only at a pinch can one ask nurserymen for them.

I bethought me then of Balsam Poplar, any quantity of which I was allowed to cut in a neighbouring tree nursery. They liked the smell, but not the sticky feel to their fingers.

From the moors also I brought with me a quantity of the flowering branches of Bog Myrtle (*Myrica Gale*), which is deliciously fragrant (even more so than the leaves), and which conveniently came into bud at the scarce season;—and here let me observe for those who have eyes, the expanding of Gale flower buds in water is worth watching.

Willow catkins they were delighted with, and, of the four varieties I took, at once selected the softest of them, to feel over and over (velvet they were likened to); and, as they knew something about Willows, they were much interested and surprised to feel and learn that Willows had flowers. One poor woman's face lighted up as she exclaimed, that "she did not know what they were, but she had pulled them when a girl." The Edinburgh Blind Asylum is passed by all the market-carts coming from the south side of the city, and I suggested to one or two of the market gardeners, that unsold bunches of flowers or sweet herbs might be left at the Asylum as they returned home. They were pleased with the idea, but I have not yet heard that any have been left—perhaps on account of fresh unsold bunches of sweet herbs in summer being dried, and which are sure to sell in winter.

It is wonderful how often kindly, well-meaning people, have to be asked for and reminded of a little kindness they are perfectly willing to give or to do; but I quite own, from experience, that the flower or gift, is the smallest and easiest part of the kindness. The time, trouble, thought, and punctuality, are the serious strain, and what people weary of after the, first pleasant burst of feeling has evaporated, the sick, poor, and blind particularly, (the latter never get better,) are sure not to pass away from amongst us; and they remember the flower-day with the precision

of a chronometer. The only argument I have heard against "wasting flowers on the blind," was this, "that a bottle of perfume would last much longer and go farther among them, and keep the flowers for the seeing-sick and poor."

Now, I hope this opinion will not weigh with any one who for a moment considers that the Blind are deprived of the sense by which we all learn most of Nature ; and to compare a flower, pure and fresh from a field or garden, with the meritorious, but meretricious *bouquets* of Rimmel, is an impossibility.

Then the great proportion of those in the Edinburgh Asylum have become blind, (only one woman and four boys having been born so,) and, therefore, have recollections of green leaves and bright flowers ; and how pleased they all were to tell me that "their Musk plants were growing," and "their bits of Spearmint had got roots."

The best arranged and ventilated work-rooms in any institution must be benefited by large basket-fuls of aromatic herbs being emptied out in their midst, the atmosphere becoming purified thereby ; and I am sure so must the health of each worker who has a sprig of Thyme or Rosemary stuck in their dress to breathe over.

Every public institution has its most convenient days and hours for receiving flowers. At the Blind Asylum, Saturday forenoon is the best time, as they

leave work early, and of course have Sunday to themselves.

Cut flowers go farther in supplying the Blind, because one sprig smells as sweet as a dozen; and they feel over the shape of one Hyacinth or Stock better than when a handful is given to them.

From the delicacy of their touch they can pick off any fading leaves or flowers on a spike, thus saving the donor's time.

I tell them, I bring them the flowers to sort and clean for themselves, not as if they were Infirmary patients, with hardly strength to smell the flowers laid by their side, as is often the case. I hope these remarks may remind any who have as yet overlooked the Blind, that although those may be in fair health, and not in want, yet still, flowers can cheer and elevate them as well as other afflicted ones. The Blind are true "incurables."

It seems superfluous to give a list of sweet-smelling plants suitable particularly for the object of this paper, but, at the risk of being tedious, I do so, having seen the pleasure they give to those who can only smell and touch flowers:—

* Rosemary, ** different sorts of Thyme, Sweet Bay, different sorts of *Arbor vitæ*, *Rhododendron hirsutum*, Gale, *Myrica Gale* (flowers for winter, leaves for summer), Lavender, * Southernwood, three sorts of *Artemisia*, Spearmint, ** Musk, Balm, Costmary, Sweetbriar, Woodruffe; Mints (*nepeta*, *melissa*,

teucrium mentha, origanum); Pot-herbs (usually so called); Balsam Poplar, Walnut (leaves), Willow (catkins), Myrtle, *Gum cistus*, Balm of Gilead, Sweet Verbena, (*Aloysia citriodora*), scented Geraniums (particularly *Odoratissimum*, Nutmeg, Lobatum, and Peppermint scented, as they loved the "soft downy feel" of these leaves); Heliotrope, Eucalyptus leaves, * Christmas Roses (*Helleborus niger*), * Snowdrops, Laurustinus, Arabis, * Wallflower, * Ribes, * Cowslips, and Polyanthus; * Lilac, Hawthorn, Narcissus (particularly poeticus), Hyacinth, * Syringa (Philadelphia), *Buddleia globosa*, * Roses, particularly "Scotch" and "Cabbage;" * Pinks (particularly double-white), * Stocks, Honeysuckle, Marigold (common yellow), Azalea, Daphne (Spurge laurel), * Lily of the Valley, Day Lilies, Lilies (*Lilium candidum*), Mignonette, Sweet Peas, Lupins (common yellow), Carnations, Chrysanthemums (they liked the fresh smell of the leaves), and *Salvia* (*Grahamii*, and "Pine apple-scented").

The names with the one asterisk * were decidedly the favourites, and we supplied rooted plants of those marked **. When frost sets in and plants have to be lifted, there is always a great waste of sweet leaves, which might be advantageously sent to Institutions for the Blind.

HARDY PLANTS IN FLOWER AT WARDIE
LODGE, EDINBURGH, ON CHRISTMAS
DAY, 1873, IN THE OPEN AIR.¹

AT Wardie Lodge, near Edinburgh, the following were in blossom on the 25th ultimo, viz.:—*Arbutus*, *Laurustinus*, Ivy, *Garrya elliptica* *Desfontainea spinosa* (one flower), *Erica carnea* and others; *Rhododendron dauricum*, *R. atrovirens*; seven herbaceous Asters, *Féverfews* (single, double, and rayed), *Achillea aurea*, *Cardamine rotundifolia*, *Arabis procurrens*, *Aubrietia* (Belvoir seedlings), *Violas* (Dickson and Co's.), *Viola odorata*, *Anemones* (single, red, and white), *Hepaticas* (single, red, blue, and white), double *Daisies*, *Roses* of different sorts, *Chrysanthemums*, *Chrysanthemum frutescens* (yellow and white), *Myosotis dissitiflora*, *Primulas* (*Auricula polyanthus*), fifteen varieties, *Oxlip Primrose*, six varieties, *Helleborus* (*H. abchasicus*), *Tritoma grandis*, *Campanula*, *Potentilla*, pot *Marigold*, *Tussilago fragrans*, double *Colchicums*, *Carnations*, *Jasminum nudiflorum*,

¹ *The Garden*, January 3, 1874.

Phlox (autumn flowering), Mignonette, Stocks, Wall flowers, Snowdrops showing colour, scarlet Pelargonium, Calceolarias, *Salvia fulgens*, *Salvia variegata*, Sweet-scented Geraniums, Balm of Gilead, Sweet Verbena, *Agathaea cælestis*.

CARPET BEDDING.¹

WHERE hardy plants are used this is perhaps the easiest, certainly the cheapest, and possibly the laziest style of gardening. I would wish to raise a warning voice to amateurs on the subject, having felt the demoralising effect of the last superlative on myself, and therefore I can speak from experience.

I will not own how many seasons the following arrangement of a border and beds has stood. As all looked as well as possible, uninjured by any weather or season, we were thankful to let them stand, having in our small way always more trials, experiments, and work on hand in the garden than we can get through ; and to have a border that required no digging, no manure, no time or labour, and yet to be filled with increasing and flourishing plants, is a temptation difficult to resist.

The border is 86 feet long, and 5 feet 8 inches broad, exposed to the full sun, which is reflected off a low wall at the back, and trees beyond the wall, which intercept rain, dew, and frost, and whose

¹ *Gardener's Chronicle*, April 24, 1875.

roots below the wall eat up all nourishment in the soil. In short, a very hot, dry, and exhausted border, and suitable, therefore, for succulent, hoary, and variegated plants.

The whole is a carpet of *Sedum acre aureum*, margined at the back with a row of *Sempervivum tectorum*, and in front with *Sempervivum calcareum*, a narrow band of *Sedum lydium* forming a green line between the grey Houseleeks and the *Sedum acre* when it has got its yellow growth on. A line of purple Crocuses within the bottom verge completes the border in front, and behind the native Houseleeks is a row of Rosemary, which when first planted admitted of a variegated Pelargonium between each plant in summer, or a white variegated Kale in winter. Now in spite of constant cutting for the inmates of the Royal Infirmary and the Blind Asylum, the Rosemary this winter will bear nothing between, so it is simply an aromatic spiky edge. In the carpet of gold *Sedum* are cut out sixteen circles of grey *Sedum* or Saxifrage, alternating with small Houseleeks, as *Sempervivum montanum*, &c., the object being that these rings show out of the carpet by colour or form, either when it is green or yellow.

The circles are filled in summer with bright-leaved Pelargoniums, which cannot have too much sun, and in winter with purple and lilac variegated Kale.

In the flat piece of groundwork between each circle is a single good-sized plant of variegated tree Ivy, *Cineraria acanthifolia*, *Zucca*, or *Aloe*.

In summer a tuft of blue *Lobelia* was dotted at the four corners of the flat piece of Gold *Sedum*, which in winter is replaced by *Carex japonica variegata*, Snowflakes, and *Scilla bifolia*. The *Leucojum* is in flower, while the *Sedum* is still green, and the Blue *Scillas* tell when it turns gold.

This arrangement certainly requires the minimum of time, trouble, and expense, for the good effect it has. Some fresh soil of course is required before planting the summer plants, and the *Sedums* are cut into shape in spring, where they have encroached on rings or margins.

When the plants on the wall—*Roses*, *Chrysanthemums*, *Clematis*, *Smilax*, *Jasminum nudiflorum*, *Ampelopsis Veitchii*—require pruning, training, or to be gathered, careful steady footsteps do the *Sedums* no harm; rather otherwise, and weeds can hardly make their way through the consolidated groundwork.

The soil is so utterly dry and ash-like that *Verbenas* and *Pelargoniums* have stood the whole winter, and I have an idea that we might venture to leave out many a plant (or even plunge them for the winter in such a border) that would suffer or be killed in properly dug and worked ground; and this, I fancy, is the great advantage of the carpet-

bedding, and one that admits of progress and experiment; at the same time the mere saving of trouble is such a temptation, and indeed so much of a necessity in many cases, that a warning voice must be raised, or it is possible that this fashion may end in a standstill, worse, as far as progress is concerned, than even the summer-bedding, when carried to excess, led to.

The centre beds consist of a Yucca, or variegated Aloe centre plant, the Aloe replaced in winter by a Phillyrea or Box; ground-work of the common grey Sedum dotted with *Carex japonica variegata*, a ring of variegated Ivy, and edged with Crocuses. A few Scarlet Tulips on the grey ground-work finishes off for Spring. The ground-work of the opposite bed is the dark-leaved *Ajuga orientalis fol. purpureis*, dotted with *Sedum spectabile*, edged also with Ivy and Crocuses; and another pair of "lazy-beds" are composed of a tender Cupressus (?) replaced in winter by a hardy evergreen, and the Ajuga ground-work dotted with *Euonymus japonica aurea*, and edged with *Euonymus radicans variegata* and Crocuses. When the dark-blue flowers of Ajuga were in bloom these were charming little beds.

The Gold Euonymus has stood the winters of 1871, 1872, and 1873; it suffered in 1870, and my belief is that the drying effect of the ground-work has both kept up bright variegation (only one plant of fifteen having sported a branch back to green), and

so checked gross growth that in spite of the late and wet season the plants were in a condition to resist the 13° of frost we had here last winter.

We find a *Sedum* ground-work (a solid sod) saves us fully 6° of frost in the soil.

We are near the sea, which often means no frost at all, and we can carry on our winter bedding-work in such beds when we are stopped on uncovered ones.

The roots and neck of the dotted plants are very considerably protected, and I think something useful and improving might be gained by experimenting on this system.

One other disadvantage of a *Sedum* ground-work and I have done. A neighbouring walk (not much used), was so hopelessly dotted with the Gold-tipped *Sedum* that any hoeing or hand-picking merely broke and spread it, and we had to skin the whole walk, and have a complete new coating of fresh yellow "ballast," and thorough and repeated rollings.

We flatter ourselves we are safe until next year.

Such an accident can be avoided by using this inveterate *Stonecrop* on beds on grass, not on a border with gravel-walk. It is our intention to lift and re-arrange our little Succulent border next spring, and collect there all our treasures in that department. The manure required to keep that border cool, and to feed plants of decent growth, would have gone far to supply us with Cauliflowers.

It is a wise plan to turn one's disadvantages into advantages, and there is no end of study, variety, beauty, and interest in a Succulent border, easy to grow, difficult to know, and quite distinct from mere lazy Carpet-bedding.

ARRANGING BORDERS IN SEASONS.¹

To have a whole border bright in daily varying succession for a given time would be, I apprehend, a temptation to many to adopt this system of arrangement.

It has withal many solid advantages, and a few of these I here note down, observing that our border, which may be called strictly a Spring and partially an Autumn one, has given us much instruction and enjoyment.

However circumscribed the garden, it must have varied aspects, and to select the best for the particular wants of each plant is the first step; then collect together those of the same requirements, and one system of cultivation suits the whole. It is merely carrying outside the plan of indoor classification—Stove, Intermediate, and Greenhouses, the shelf for Succulents, the shady corner for Ferns.

Without making our Gardens into Nurseries, or giving them the formal appearance of a Botanic

The Garden, February 13, 1875.

Establishment, I do think a somewhat more systematic arrangement would be a gain for amateurs, as they would lose fewer plants, and economise labour. How often, when a plant is received, a vacant spot is sought for it, and there it is put for no other reason than that this empty space exists. Over-crowding in all departments is, without exception, the rule in small gardens. By arranging them in seasons, some progress would be made towards remedying weak points in the way of disposition. A border facing the north suits well for a Spring garden, and a few trees in the background of light foliage (Birch, Willow, Poplar,) merely prolong the flowering of the Primulas, &c., by the thin shade they give in spring, and do more good than harm in very hot summers, when their leaves are fully out.

One learns much while collecting the spring-flowering shrubs and plants, and the quest after some particular variety is very fascinating; great, also, is the satisfaction of having hunted it down, and of selecting the best variety, or, at least that one which does best in your border; but, as seasons go on, withdrawing duplicates and such individuals as will not thrive, must be done.

You may be told to renew such year by year, and to keep to your plan of having every plant procurable in that Season border; but this is wrong. It is a trial to part with *Menziesia impetrifolia*, *Polygala*

Chamaebuxus, *Daphne Cneorum*, *Dracocephalum al-taiense* of finest blue, *Primula integrifolia*, *marginata*, *intermedia*, *Trillium grandiflorum*, *Iris tuberosa*, *Narcissus Bulbocodium juncifolius*, *Scilla bifolia rubra*,—a long list, possibly, but your border will be still quite full, and the excluded plants will thrive in other spots of the borders. I would like well to have a Spring Rock-garden. Until one sees how plants do thrive luxuriantly in their stone compartments—as arranged by Mr. McNab in the Botanic Garden of Edinburgh, where soil and aspect, shelter and drainage are all provided in due proportion to suit each tribe of plants—one has no idea of the true character of scores of beauties unless one has had the good fortune to see such in their native habitats. No crowding or intruding on each other need ever arise, and Alpine treasures are there in abundance.

But one cannot have everything, and we are well content with our Border on the flat, and make the best of it. Although, during Spring, that Season's border has a profusion of flowers, during the next eight months it is positively devoid of them; and this is one of the greatest advantages of the plan, as one comes to learn what beauty there is in a healthy flowerless border. In July, I have stopped to admire a group of the following; *Paeonia*, *Iris*, *Saxifraga cordata*, *Anemone sulphurea* (in feathery seed), *Orobis angustifolius*, *Waldsteinia geoides*—a plant which always pleases me from its different shades

of green in the young and old leaves, which are also of interesting texture—and the grey deciduous Sedums of completely different forms.

We have our Borders arranged in rows for convenience of hoeing, and to know exactly where each plant is ; but I know some prefer to plant their borders in groups, and the effect is, perhaps, less formal than it otherwise would be. The Autumn Border can only be partially so, for to have berries then, we must have had a Spring of flowers ; but we have collected such subjects as *Euonymus Europæus* (Spindle Tree) ; Privets, black and yellow berried, and the autumn flowering one, *Ligustrum japonicum*, *Crabs*, *Cotoneaster* (we hope to get these into pillars and standards) ; *Pernettya* (three sorts), *Leycesteria formosa*, *Escallonia Macrantha*, *Myrica Carolineana* (for the autumn tints) ; old-fashioned and despised Roses that bear hips, the single white, only to be seen in cottage kale-yards (the double variety of which is considered the white rose of Jacobite days) ; Scotch Roses with bunches of black fruit ; *Rosa ferox* with spiny stem ; Rose of Sharon, some quite thornless and bearing very long hips, and others nameless to us, but all bearing fruit ; Hollyhocks, Helianthus, Phloxes, Asters, Lilies (to be cool), Rudbeckia, Chrysanthemums, Carnations, Penstemons, Fuchsias, *Scabiosa caucasica*, *Anemone japonica* (three sorts), the *Spirea callosa-alba*, Snowberry, Marigolds, and a number of plants that are not like

these, consisting of many varieties. Brambles are trained up the Apple-trees, *Rubus lacinatus*, *Reticulata biflorus*, on whose white bark can be written its name and date; but I must own, they all prefer to fruit on the wall. Mistletoe is on the Mountain Ashes, and Crabs. Each February I go round and smear suitable trees, so as to have this interesting Parasite, in all stages of growth.

Bryonia, Tamus, and Hop, twine up the trees.

The Autumn Border also faces the north, and thus prolongs the flowering of many species.

Asters we grow in both our south beds to have them early, and in the autumn and north beds to spin them out.

We cannot have too many Asters, and yearly add to our collection, weeding out, as we pick up more attractive varieties. In the Autumn Border are introduced herbaceous Poppies, Delphiniums, tall *Campanula grandis* and *pyramidalis*, Van Houttii, as there they form a succession reserve crop to those in the mixed south borders.

All good useful plants should be grown in different situations. Their season of flowering can thus be prolonged for from four to six weeks. Lily of the Valley, Violets, and successive sowings of Mignonette and other Annuals, are grown in beds with this object; but a small garden cannot have beds of all that the owners would like to have. But, if you have a duplicate, look about for a warm and

early, and a cold and late spot, and set one plant in each place.

Our rule for these Borders is to have only permanent plants in them. Thus Dutch bulbs (so-called) are excluded from the Early Border, and *Gladioli* from the Late one. Annuals, and Biennials, with the exception of Honesty (purple and white), and Marigolds from both.

To ensure success with such Borders, thorough working and preparation of the soil are essential, and not a day should now be lost, as the long storms have thrown such work behind-hand in many districts.

EFFECTIVE FLOWER BEDS.¹

A LOVE of Plants is a very different thing from a mere love of Flowers.

Now that the extreme rage for Bedding-plants is on the wane, there is some chance of a wider range of plants becoming known to, and cultivated by, amateurs, and a deeper knowledge of gardening and plants in use—not merely a surface knowledge, such as is required for the ordinary style of bedding-out Florists' flowers. It is, perhaps, hardly fair to disparage a system that has satisfied so many for so long, without, at the same time, proposing a substitute; and to those who are, as yet, mere lovers of show flowers, the following combinations for beds of Hardy and Annual plants may not be useless. The climate of Scotland is generally considered suitable for these last, but Edinburgh, where the situation is exposed and the soil light and warm, is not, naturally, the best locality for delicate fragile seedlings, and therefore it is right to explain that annuals, grown under such circumstances, require more trouble

¹ *The Garden*, February 7, 1874.

and preparation of the soil than are needed for Variegated Geraniums, for instance.

One seldom sees now the finely-raked border, and a neat row of rings, with a stick in the centre, and the name of the Annual stuck through the split stick; often was the name the only thing seen of the seed. Deep hoeing did not answer for fine raking, so the soil was a solid cake below the dressed surface; now, annuals must have cool and well-worked deep soil to do them justice, or rather to enable them to grow at all and flower for any length of time. The beds of Hardy and Annual plants, which I shall now enumerate, possess an amount of show and colour sufficient to make them attractive, and they remain long enough in flower to satisfy any reasonable lover of a garden. I may observe, too, that with the exception of No. 7, which was seen in perfection at Messrs. Jackman's, at Woking, and No. 19, I have not happened to meet with any of these beds which we have tried ourselves, and found to suit our garden.

1. I begin with the latest-flowering bed which I have, and which is now (January 20th), covered with little white stars, viz., *Aster ericoides*, the first flowers of which expanded in October.

This is a remarkably neat-growing plant, and its heath-like appearance is attractive, even when not in flower. The pair of small beds which I have of it consist of a centre plant of Golden Queen Holly, the

outside edging *Euonymus radicans variegata*, the rest being filled with alternate plants of the little Aster and dwarf double-red Sweet William. Even when done flowering, this Dianthus, owing to its dark-reddish foliage, contrasts well with the variegated Evergreens and light growing Aster.

2. *Campanula carpatica* (blue) with a broad edging of the yellow *Enothera missouriensis*. By preventing the Campanula from seeding, this bed will last a mass of flowers nearly four months, beginning with June and July.

3. *Ononis rotundifolia* (Rest Harrow), a bright pink Pea-flowered plant, mixed through with *Dactylis glomerata variegata*; this makes a lovely summer bed.

4. Common double white Pink, edged with *Heuchera lucida*. Among the Pinks are small single red Tulips which come up and flower year after year, and which well contrast with the grey foliage of the Dianthus and blue *Scilla bifolia*, through and outside the brown-leaved *Heuchera* edging. This bed in summer is a mass of white, and, by dotting in a few plants of crimson mule Pinks, there are some flowers in Autumn.

No. 4 is a good Winter and Spring bed, and a most fragrant one in Summer.

5. Alternate plants of *Erica carnea præcox* and *Heuchera*, with room between each of these permanent plants for a tuft of *Campanula carpatica*, or

Campanula trachelium; or, if an Annual is preferred, dwarf China Asters, purple, pink, and white; or *Tagetes signata pumila*, the lively green foliage of which is pleasing even before the plant comes into flower.

6. (Large bed): centre plant, Golden Yew, the rest of the bed being filled with three shades of red, consisting of the *Phlox Drummondii* pegged down twice, either mixed or shaded, from light to dark, or *vice versa*, according to taste.

The mass of Phlox is surrounded with a belt of the pure white *Oenothera marginata*, and an outside edging of *Heuchera*. *Dianthus Hedderwigii* would do equally well with the permanent plants, if a change is wished from the Phlox; both come into flower early in July, and are superior to Verbenas, and last until November, when the Winter beds require to be planted.

7. *Clematis Jackmanii*, and its varieties, edged with *Vinca major elegantissima*, *Minor aurea* or *argentea*, or *Euonymus radicans variegata*, or *Lonicera reticulata*, but although hardy, this last loses most of its leaves in winter, and *Vinca elegantissima* is spoilt by severe frosts; the smaller Periwinkles and *Euonymus* are surest. I was surprised to find, on cutting over the Clematis this winter, fine roots where it had been pegged down, as I had always thought it must be increased by grafting. If a high bed is wished for, some suitable branches for the Clematis to crawl

over, quickly make the bed any height desired. I have seen *Tropæolum speciosum* grown in this way in Perthshire and Aberdeenshire with most brilliant and beautiful effect, but it does not succeed about Edinburgh.

The Clematis's first flower opened in July, and the last in November.

8. *Erica carnea* or *præcox*, Violas and Pansies, in alternate lines or rings, and in colours according to taste. It is hardly possible to go wrong with this bed.

When the Heaths are too much grown to admit of Violas between them, and you are not inclined to part them, *Phlox Drummondii* (mixed), will give bright eyes of colour all summer and autumn, and if thinly planted, will not do the least harm to the Heaths, which, of course, must never be overgrown by other plants, but, by clipping over the dead flowers, and trimming in sprawling pieces, they will last for years undivided, if so wished.

9. *Dactylis variegata* and *Phlox Drummondii* intermixed make a light mixed bed.

10. *Anemone Honorine Jobert* (white), alternated with Chrysanthemum "Bob" (dark red), the edging being *Heuchera*, makes a pretty bed.

11. The small *Fuchsia pumila*, with white *Vittadenia trilobata*, makes a very neat and lasting bed.

Some think the *Vittadenia* too like a Daisy, but I am fond of all rayed flowers, and prize any plant

that lasts six months in flower; it sows itself (if one chooses to let it), stands the early frosts, fades into pinkish-lilac, so as to produce various shades of colour at the same time on the plants, and requires no pegging or cutting-off of dead flowers. As it is not a Daisy it does not shut up in sunless weather, or in the afternoon. It also makes a good hardy Greenhouse basket-plant.

12. Groundwork: the little yellow *Oenothera prostrata*, thinly dotted with Viola "Perfection," or any other purple lilac, or blue Viola or Pansy of compact habit.

13. Centre plant: *Yucca gloriosa*, set in a groundwork of dark blue *Ajuga purpurascens*, (summer), dotted with *Sedum spectabile* (autumn), the last having fine large pink tassels of bloom which stand the first frosts. This bed is edged with variegated Ivy.

14. Groundwork: the lovely *Mesembryanthemum tricolor*, dotted over with Echeverias of different sorts, and edged with *Antennaria tomentosa*.

By the time the groundwork has ripened what seed is required, and the plants are removed (not that this is necessary in the case of this *Mesembryanthemum*, as it spreads out so regularly, and the flat red fleshy seed-vessels are peculiar-looking), the Echeverias are in bloom.

I was surprised and delighted by the way in which the little *Mesembryanthemum tricolor* flourished and

opened freely in the wet summer of 1872, a circumstance I suppose to be attributed to our light soil, which would be the better for rain every second day; the only thing we have to guard against is, to see that the boxes of seedlings are thoroughly and gradually hardened off before planting out; when so prepared, they can be turned out in the middle of the hottest day, require no watering, and do not give the least trouble, and we find that this little Succulent is one of the quickest of Annuals to flower. I fancy by having two sowings, and not saving seed, we could have this groundwork in perfection the whole season, except during the short interval between the second planting and flowering of the same. I mean to try it, for this bed was beautiful, and gave us no trouble.

15. Large or small beds of *Dianthus Heddewigii* are invaluable. This year, some beds were the admiration of every one, both nurserymen and amateurs. We never had such beautiful Chinese Pinks, of every shade of red, from delicate pink to dark blood-red, lilac to purple, white, and all degrees of blotched, and streaked, and spotted in every delicate shade, and decided markings.

There were twenty small divisions filled with these bedding Dianthuses, and in each compartment there were different varieties. We regretted having to transplant them, still in flower in November, on account of some necessary alterations that had to

be made in the beds. The *Dianthus* were edged with *Artemisia stellariana*. They last well in water, and bear close inspection.

16. Large bed (to look down upon): centre plant, a tuft of best Gardener's Garters (*Phalaris arundinacea elegantissima*), surrounded with *Aster Bessarabicus* (best blue), then scarlet Pelargoniums (somewhat large plants), a band of *Helleborus niger major*, the edging being alternate plants of purple-leaved *Plantago rubescens*, and *Funkia japonica cordata*. As all our beds and borders are edged with hardy Bulbs, No. 16 has flowers in Winter (Christmas Roses), Spring (Crocuses), Summer (scarlet Geraniums and lilac Funkia Bells), and Autumn (Asters); and, owing to the variety of shape and colour of the foliage-plants, beauty is still maintained in the intervals between the times of flowering of the different plants. *Helleborus niger major* should be grown for a foliage plant, even if it never flowered.

In old gardens in the north I have, at a distance, mistaken clumps of this Christmas Rose for those of Pæonies.

17. Centre plants: *Spiræa*, with one plant of *Tritoma grandis* on each side. These three plants were surrounded by *Delphinium formosum* (selected seedlings of good clear blue), the small double yellow Sunflower, then a ring of alternate plants of *Saxifraga cordata*, and the finest and earliest flowerer of the large-leaved Saxifrages; one we got unnamed.

from Mr. Niven, of Hull, belonging to the Ciliata type. This bed is edged with *Heuchera*, and between each *Saxifraga* are dwarf Lilies, *Lilium venustum* (red), or *Lilium superbum* (yellowish), alternated with the white trumpet, *Lilium eximium* or *L. longiflorum*, and between every plant of *Delphinium* and *Sunflower* is *Lilium croceum* (orange). This bed has flowers in it in Spring (Dwarf *Narcissus* for bulb edging, and *Saxifragas*), Summer (*Spiræa*, Lilies, and *Delphinium*), and Autumn (*Sunflowers*, Lilies, and *Tritomas*, which last continue to flower long after the *Sunflowers*).

18. Foliage-bed: centre plant, Golden Yew, surrounded with *Cineraria acanthifolia* or *Centaurea ragusina*, the last of which stands most winters with us. The *Cineraria* is perfectly hardy; we did not have it, however, in 1860-61. Then a broad mass, pegged down, of Red Spinach (seed from Belvoir—very superior to what is usually bought as Red Orache, and does not acquire so much of the rusty colour when old).

Next a ring of pegged *Artemisia annua*, the outside edging by the grass being *Stachys lanata*. This bed was so satisfactory that we had it two or three years in succession, and the Spinach came up of itself more than we required, although the beds had been filled for winter and thoroughly dug.

19. *Lobelia fulgens* intermixed with *Tussilago farfara variegata*. This is a grand bed and unlike every other; but I must admit that the

Lobelia does not succeed with us as I have seen it in Dumfriesshire, where the climate is damp and the soil heavy—conditions which suit both plants.

The dark red-pointed foliage of the Lobelia contrasts well with the round bold Coltsfoot, and it is a good bed before the intense scarlet flower-spikes come into bloom.

For a distant bed or row—to shut out kitchen-garden crops, for instance—alternate plants of *Symphytum officinale fol. variegata*, and *Dielytra spectabilis* make a beautiful combination, both of colour and form; and I was much struck by it when first I saw it in a friend's garden. By persistently pinching out the flower buds of the Comfrey, the plants are kept bushy, and do not run up, as they naturally incline to do; and by preventing its flowering, the fine creamy foliage is kept handsome much longer than it otherwise would be. Pinching out is a far better plan than cutting over the flower-stems, which we used to do, thus having fine variegated leaves close to the ground. By pinching, you have a big bush covered with fine leaves.

Vinca major elegantissima, grown as a pillar about five feet, for back rows of Herbaceous borders, looks uncommonly well; the effect is finer and the growth more graceful than either variegated Ivy or variegated Bramble, and it is not deciduous like *Acer negundo*.

When the large blue flowers are in bloom it must be beautiful; it has stood unhurt through the winter, from 1869 to 1874, and when I saw it at a distance I mistook it for *Cobæa scandens variegata*.

My list of our proved Hardy beds is not exhausted, but the arrangements I have mentioned must suffice for the present; our beds are all on grass, and being circles and ovals, simple in shape, the grass-cutter runs round them all without loss of time, and, in clipping the edges, the shears have not to be lifted and reversed.

One of the most immediate benefits gained by filling beds with the plants recommended in this paper, and one patent to all—even rigid bedders—out of exotics—is, that the extent of glass, always too limited and over-crowded even in the largest places, at times, is set free for its legitimate occupants, and the miserable crammings and makeshifts, for storing away the struck and lifted bedding stock through the Winter, and still more harassing time of Spring, are done away with.

Not merely does the bedding system, carried to extremes, curtail the variety of plants in our flower gardens, but the interesting and valuable contents of frames, greenhouses, and stoves, are all injured, and limited, on account of this one object; even Vineries and Peach-houses are not improved by the multifarious and multitudinous collections of bedding-plants that are thrust into them.

NATURAL HISTORY—WATER-BEETLES.¹

IN the numbers for January last there were notices of *Dytiscus marginalis* as a pet. Might I suggest that the most interesting way to acquire these Water-beetles, is to catch them oneself, and the present is a very sure time to find them (August.)

The male is of a fine glossy black, and his fore-legs are furnished with peculiar suckers. The female has her wing-covers ribbed.

As it is out of the question that these Beetles can be allowed to fly, we kept ours in the cheapest confectioner's show-glasses we could procure, thus insuring them at least a good dive; and that they enjoyed this exercise was very apparent. After being fed (they knew the breakfast-hour and feeding-stick perfectly well, and came bumping against that side of the vessel where they were fed), and on receiving their morsels of fresh meat, they at once dived down to the bottom, from whence they rose with hind-legs extended and air-bubble at their extremity, only to dash down again and again. I

¹ *Gardener's Chronicle*, August 29, 1874.

had a male *Dytiscus* for above two years, and he died when I was from home.

It is at night that beetles incline most to flying. I never happened to catch them attempting such darts in the daytime; but knowing that all beetles fly, we had rims of slight cardboard, which fitted exactly half an inch deep around the top of the glasses, and to these was gummed a piece of Brussels net of the coarsest make, and a very neat, convenient lid was the result, which came off and on readily, and yet fitted so firmly, that no passer-by or thorough draught ever knocked or blew them off.

We found them useful too for Prawns and Shrimps, or in weather when the fish were jumping. The rim of a fern-dish was always taken advantage of by the Blennies of sorts, and we kept the water at a level to enable them to lie dry at pleasure.

Of the seven varieties of Water-beetles that we kept, the pretty little *Gyrinus natator* was the shortest liver, but they are so common and so easily caught, we usually had two or three like drops of quicksilver, circling on the surface of the water.

The pretty dark-blue and gold *Phlorotius hermani*, Singing-beetle, was very interesting. It is not a native of Scotland, and I do not know where it is plentiful in England. I captured our specimens in an unused clay-pit in Herefordshire.

In one of my walks last month I came on a charming muddy hole, clear of overhanging herbage,

and where I could conveniently watch *Gyrinus*, sporting in the one patch of sunshine, three other sorts of bustling Water-beetles, Boat-flies, *Notonecta glauca*, and a pair of Dragon-flies not long emancipated from their cases, and poised on a fragment of stick on the surface of the water, never again to grovel in the mud below—the bright blue body of the male contrasting well with the sober brown of the female.

Listening to the Grasshoppers and watching the Water-beetles, I was reminded of that charming fairy tale of Sarah Coleridge, "*Phantasmion*," so full of truthful allusions to insect life in particular, and Nature in general.

I may add, that after trying all Water-weeds usually grown by the lovers of Aquariums, it struck me that the evergreen and ever-growing Water Moss, *Fontinalis antipyretica*, would be the very thing, as, like Sea-weeds, it grows on stones, and you can select a suitable sized one for your dish, and no further trouble with mud or sand, or injury to the plant. It was a perfect success, and we never used any other weed where we wished to have vegetation at all; but I never saw this Moss employed, or for sale with other Water-weeds. It is found in most clear running streams.

ROOM PLANTS AND POT COVERS.¹

AMONG the many receptacles that have been named for concealing the pots of Room Plants, I do not observe Baskets. After trying many plans, we have found nothing so good as baskets of close texture, painted and varnished a warm brown (I believe called "japanning"), a colour which detracts from nothing, and harmonizes with everything, the brown earth and green vegetation being a safe example to follow.

We send pots of the various sizes used, to the Blind Asylum, and there the baskets are made to fit them; they have stout wooden bottoms, as the weight of the plant is too great for basket-work. When not required, they fit one within another, and take up very little room. The varnish prevents the adherence of dust and dirt. Fresh Moss is laid on to cover the surface of the pots. Our large baskets for groups of plants seven and a half to ten feet in circumference are made of open basket-work, and are lined with Moss; and here let me

¹ *The Garden*, December 19, 1874.

remark, that some of the species of *Hypnum* are the best in the long run for this purpose; though there are many Mosses more beautiful, but they do not last so long.

The *Hypnums* grow on "dykes," or loose stone walls, and also on the exposed roots and trunks of trees, and come off in fine large flakes, very suitable for linings.

It seems to be generally forgotten (as also with Sea-weeds), that Mosses are complete plants, with roots and seeds, and that it is in vain to expect such species as are plucked up from among Grass, or scratched off the soil, to last long.

By having two lots of the *Hypnum* it can be changed weekly, and if spread on the floor of the potting-shed and well watered, it is wonderful how revived and refreshed it becomes for the next week's use. By collecting it off stone "dykes" there is less danger of introducing what Cowper calls "Visitors unwelcome, into scenes sacred to neatness and repose"; and the "necessary act" which "incurs no blame," is avoided, of destroying centipedes, wood-lice, beetles, deceptive spiders (with legs folded up, and feigning death), small worms, clusters of snails' eggs, and larvæ of all sorts, which congregate under the moss on the bark of trees. In summer, when all Mosses are, so to speak, out of season, we find a good substitute for our linings in turf; first mowing it close, and then cutting it

into strips long enough to go round the inside of the Basket. The grass grows in a couple of days, and looks very well peeping through the basket-work.

If we were within reach of a Hill, or "Links," where fine turf was to be got, with such plants as Polygala, Tormentilla, Thyme, Cistus, Galium, Euphrasia, Linum, all flowering amongst it, a charming addition to the Plant-basket would be the result; as it is, we must be content with our roadside turf, drawing out Dandelions and Plantains, and being satisfied with a Daisy or two.

Having a large stock of Saxifrages and Sedums for winter-carpeting, we are using them this Winter, when our supply of country Moss fails.

Long sods of grey Sedum and green Saxifrage mixed, and the gold-tipped *Sedum acre*, will, by February, be in good order for producing variety. The effect is very good, and they, like the Grass, grow, and do not merely keep alive, as does the Moss. For Room-plants in winter, there are a few hardy ones which we find useful in saving Stove-plants which suffer from the extremes of temperature of the room. *Carex Japonica variegata*, for instance, has quite the character of *Pandanus gramineus*, or the small-leaved *Dracæna gracilis*; by having it for a short time in a stove, as I saw they had at Methven's Nursery, it acquires a delicate appearance, which, in the opinion of some, gives it an additional value.

The green and variegated *Ophiopogon* and *Reinckia carnea*, are also useful, and do not suffer from a sudden fall of the thermometer.

The leaves of all droop over the edge of the Basket among the small-leaved Ivies and Vincas, which, to save room, we do not have in pots but tied in moss, when they slip into any vacant spot.

Veronica Andersonii variegata (gold and silver), is another very ornamental plant; it, however, is impatient of the dry air of a room, and is therefore more suitable as a single plant, which can be removed and watered, if need be, without burrowing in the Moss, and disturbing the mixed group in a large basket. *Ficus diversifolia* I still never meet with. It is a most interesting, distinct, and invaluable Room-plant for summer; we do not risk it in our cold rooms in the winter, as I fear it might cast its small yellowish fruits, with which every branch is laden throughout the year, but its thick, leathery, peculiar leaves would stand as well as *Ficus elastica*, I have no doubt, if the plant was thoroughly hardened off.

I hope to send shortly a photograph of our stock plant in its Drawing-room Basket. I fancy these plain brown baskets do not attract the eye from the plants—the first point to be considered, in my opinion, in any arrangement, either in the garden or house, or with cut flowers.

To enhance the beauty of one plant, by contrasting or combining its form or colour, with others, is a safe and legitimate attempt; and we see such pleasing effects every day, in the fortunate grouping or position of trees in the landscape (too seldom by any design of the planter), down to the Mosses and Lichens, grouped on the trunks of these trees. But when man's inventions in the way of stone and lime, statuary, rockery, gold and silver vases, Majolica-ware dishes, elaborate wire-baskets, and glasses of fantastic forms, are attempted, then the difficulty is so great, that nine out of ten fail; and the tenth will be a very questionable success in the eyes of the true lover of plants and the honest student of Nature.

NOTES FROM WARDIE LODGE.¹

Oxalis corniculata rosea, when it gets into the soil, is universally considered a weed and pest, and I was inclined to regret finding it among the Hanging-baskets in our stove ; but the accidental combination of it with *Sedum carneum variegatum* was so suitable, that we always have a basket hung round with these two kinds of Trailers.

Disappointing with us as outdoor edging-plants, grown thus they give no trouble, and are very attractive ; and in the greenhouse a very small green-leaved *Oxalis* and *Linaria cymbalaria*, weeds also, are turned to good account in the baskets there, and made the best of. Both *Oxalises* we use as Trailers for small flower-glasses, and what some consider a drawback I count an object of interest—viz. the folding down of the leaves in the evening. Far too many people know plants only in their cut state ; and therefore I think it is of use to point out some of their peculiarities, and then we shall not be told that *Oxalis* does not stand in water, and that *Acacia*

¹ *The Garden*, January 16, 1875.

pentaphylla is already withered up. Of course, in the morning, such mistakes are rectified with surprise, when the leaves of both plants are again expanded, and all right. Buds of *Oenothera eximia* are another noteworthy object. Let them be gathered just as the calyx is beginning to open in the evening. Some friends, returning to the drawing-room after dinner, scarcely believed these large white flowers, wide open, were in truth the buds; and next day fresh buds upon the dinner-table were watched, and the interesting fact was then believed; the pistils also were objects of admiration.

In a garden periodical, a few weeks ago, I noticed the advice that, for ornamental purposes, the anthers of Lilies should be cut off! Now, as the mass of those who buy cut flowers do not grow them, it is quite possible that the eyes of such individuals will come to see beauty in the imperfection of a flower, as others do in the cropped ears of a terrier. Let the Lily be cut in bud, and watch the gradual folding back of the petals, and the anthers, laid at first perpendicularly to the filaments, and by degrees altering their position to the horizontal, then so finely balanced, that a breath makes them quiver like the needle of a compass. Once observe this order of things, and I do not believe any one could endure to disfigure the Lily as recommended. The economy of space in Nature, exhibited in the packing and folding of leaves and flowers in bud (one small item), is

simply endless in variety, and a source of constant admiration. Many a practical hint for daily use may be gleaned in the course of thoughtful observation of Nature's method of doing things. In gathering Lilies in summer, I make a point of cutting them by themselves, and carrying them erect and with care, and, if possible, set them at once in the glasses they are intended for.

Lilium candidum, without its golden anthers, would lose a most peculiar beauty, so would *Lilium testaceum*, or spotted *Lilium tigrinum*. A few late buds of *Lilium lancifolium* have lasted above a fortnight in water this last month, and have been, from their tardy opening, very interesting to watch. Of course, I am objecting to the anthers being cut off by way of an improvement to the look of the flower—to "painting the Lily" to death, in truth. What would the Christmas Rose be without these stout creamy clustering anthers—*Helleborus abchasicus*—so striking in that respect; or purple and white Crocuses, without their orange centres; Hepaticas, with various coloured anthers (the earliest to flower being the single white with pink stamens), and their cousins the single Anemones; the common black-anthered *Anemone coronaria*, *Anemone robinsoniana*, with its bewitching golden circle, to the autumn *Anemone japonica*, *Honorine Jobert*, with its pale yellow. How fond Miss Mitford was of her Anemones, declaring their rich colours could only be

matched in art in Old Glass Windows, or in polished Precious Stones. Far too seldom do we find beds of common Anemones. Stray flowers could be got all through the winter, and excellent fresh foliage judiciously abstracted, so as not to weaken the roots. Though they be of any shade of red, purple, or white, the black anthers are as much a point in a flower as eyebrows are in a face. Summer brings us on to Poppies, herbaceous and the annual varieties, single of course, or we should lose their beautiful thick rings of stamens, black, yellow, and white.

Take care to catch the flowers when opening; for position, shape, and colour of the stamens alter in all plants, although all are not so easily watched with the naked eye of the amateur as Lilies.

The pistil of a Canterbury Bell (*Campanula medium*) is beautiful. What a prize is a real Clove Carnation, with its fine white horns curled like the proboscis of a Hawk-Moth, or the empty seed-pods of an *Epilobium*!

Yet they have come to be considered a fault in florists' eyes, and many do not know they ought to have such graceful appendages. Passion-flowers, Cactuses, Fuchsias—but I might go on for pages before getting round the Seasons to the Christmas Rose again.

Among Malvaceous plants are many beautiful examples—as for instance, the Hibiscus, Hollyhock, and most noteworthy at present, the lovely pure

white Abutilon (*Boule de Neige*,) with bright orange pistil. The next class, Diadelphia, with its extensive range of Pea-flowers, is perhaps the least attractive for my present train of thought.

• All bulbs give us, more or less, good examples.

In November, when seeds are perfected, and the great work of outdoor plants is over, one has to trust to memory. In Spring, Summer, or early Autumn, one "tour round my garden" would supply one with too many specimens, and I like to have the very plants before me when I note them down.

PLEACHED ALLEYS.¹

I WISH every garden had its summer and winter "Pleached Alley." The Summer one, consisting of the orthodox Shakspearian Roses and "Lush Woodbine," commencing with the Early white and very sweet *Lonicera fragrantissima*, Sweetbriar, and Scotch Roses (attracting early bees), and ending with the evergreen *Lonicera glabra* and *Gloire de Dijon*—tempting sunning places for the latest butterflies (Red Admiral)—both of which, if the season be favourable, would flower far into December. Among the Honey-suckles I would also include the delicious *Lonicera flexuosa*, *Lonicera xanthocarpa*, and *Lonicera parviflora*, that form fine clusters of yellow and red berries; and I would decidedly have a single Persian-yellow and copper Austrian-Briar up the trellis for the sake of their refreshing and fragrant early foliage.

The Sweetbriar would be as a hedge outside the whole length, and all varieties of Scotch Roses in a row on the other side. With the tiny *Allée* of Rose (Scotch), and the huge *Gloire*, extremes would meet, and make a long season for the "Beatrices"

¹ *Gardener's Chronicle*, August 8, 1874.

to "run like lapwings" to their "woodbine coverture." A light pair of steps should be kept at hand to reach the late Roses, that one may never fancy them "sour grapes"; the dwarf Scotch bushes are convenient to hover over and select from, each dainty bud more tempting than the other.

But the Winter Alley would, I am confident, be the most pleasant resort in a close Summer's day. I would make it entirely of these four Poplars—Balsam, Aspen, Italian, and Abélé.

The first, with its Aromatic fragrance in earliest Spring, would form principally the sides, and the roof would be arched over with the sweet tinkling Tremula and Italian. All these Poplars have a more or less flattened foot-stalk set at right angles to the leaves, which form the special charm, particularly in the two last-named species. I would have two or three Abélés, for the sake of their white under-leaves, to give light as well as air to my high roomy Alley, and a wand of Willow here and there, of all those sorts that have early and pleasant catkins, and bright red, yellow, and purple barks within reach of eye and hand.

I would make the entrance through an arch of Rosemary, and the exit through one of *Salix caprea*, whose early flowers would attract innocent flies of various sorts, and please me when I came out to watch the stirring of the Balsam buds, and see if the resinous sap was showing. There should be a

hedge of Rosemary on the one side of this Alley, and a bed of evergreen Thymes, Lavender, and all sorts of sweet Aromatic green Herbs on the other, all collected together safe under my eye. But it is as an Alley "of the Winds" that I would principally advocate this Poplar, and I am sure popular, covered walk. Some of the endless and beautiful effects produced by a breeze, could conveniently be studied, and we do not in planting take this sufficiently into account—the bad effects of wind we are always keenly alive to. We are sure to have wind, therefore let us see the white under-leaf of wild Raspberries in the hedges, Bay-laurel in shrubberies, planted in the direction of the prevailing wind. Abélés, and *Acer dasycarpum*, and the purple colour of the under-surface of the leaf in *Acer pseudo-platanus purpureum*, in our plantations and woods, and in particular Lombardy Poplars, for their peculiar and beautiful swoop in a breeze.

Let them have plenty of room, so that from any quarter that the wind may blow we can admire its graceful sweep unimpeded, unlike that of any other tree. I will quote better words than my own: "One beauty the Italian Poplar possesses, which is almost peculiar to it, and that is the waving line it forms when agitated by wind. Most trees under these circumstances are partially agitated—one side is at rest while the other is in motion—but the Italian Poplar waves in one simple sweep from the

top to the bottom, '*elle plie et ne se rompe pas.*' All the branches coincide in the motion, and the least blast makes an impression upon it when other trees are at rest."—(*Vide Macdonald's Dictionary of Practical Gardening*, 1807.)

In the Alley not a "catspaw" will be lost; long before one feels it, it will be seen in the gentle quiver of one or two leaves (not always at the top or on one side of one branch); it will be heard first in the sweet tinkle of the Italian, more sensitive than the Aspen, and of a completely different sound. How instantaneously does the Aspen stop at times, or, may be, go on pattering like rain for a few seconds; no two airs giving the same sounds. I always fancy Poplars make the best trees for hot weather, as they multiply and utilize the slightest breath. The mere rippling sound cools one, and they certainly keep off flies, which heavy-shade trees like Sycamore and Horse Chestnut do not, for insects cannot settle upon their restless foliage, which in July, methinks, is no small advantage. After a thunderstorm or steady rain, when the Summer-flower Alley will be dripping and strewn with Rose petals and Honeysuckle flowers, the Poplar leaves will have "merrily danced" themselves dry, if ever they were wet. No trees, authorities tell us, suffer so little from storms.

In Spring the Alley would be bright yellow with the young Balsam-leaves, and rich gold in Autumn

with the old foliage of the Aspens, beautiful to look at as well as to hear at that season.

As all Poplars have suckers more or less, a succession crop can be selected to have tops on a level with the eye; the leaves on the young rank suckers do not twitter so well as those on the older wood. We have all paused to listen to the soft hushed sound of the young deciduous needles of the fragrant Larch in spring, or the louder "soughing" of the hard evergreen ones of the Scotch Fir in winter, and the brittle rattling of Beech-leaves in autumn; but for summer sounds there are no trees like the Poplar, as sensitive as an Eolian harp; but not made by man—they are perfect, and never go out of tune. By the bye, Goëthe (as I have read somewhere) had these wailing instruments, true "Penseroso" nightingales, "most musical, most melancholy," hung in the trees in his garden.

If I live to extreme old age, and my winter walk can only be to "trace this Alley up and down," I shall have Eolian harps hung up ("Air Harps" they are called in Germany), a large one at the entrance arch, where there will be the strongest draughts, and little ones among the Aspen branches—in keys (they are usually in A, three sharps) to suit my aged quivering fancies and humours, when the Poplars are silent.

In Winter the birds will be fed regularly in both

Alleys, and, thus encouraged to build, one would be sure to have Robins and Wrens, and

“The Ouzel Cock, so black of hue,
With orange-tawny bill,
The Throstle with his note so true,
The Wren with little quill.”

Midsummer Night's Dream, Act III., Scene 1.

Blackbirds and Thrushes, I observe, always love to build on the top of arches and bowers.

Sparrows would not be permitted to build their untidy nests, as straws, rags and tags, are an abomination; but they would be fed, and they would keep the Roses clear of caterpillar and aphid. We should have great enjoyment in the birds, and we should mutually watch and trust each other.

Then the Alleys must not be far from the house, at the same time retired from the main paths, for the Birds must not be disturbed, nor the Roses pulled by every idle passer-by. North and South would be the direction of the Summer Alley, so that the Roses and “Honeysuckles ripened by the Sun,” (*Much Ado about Nothing*, Act III. Scene 1), would get the morning and evening rays. The Leaf-Alley must be planted according to the direction of the prevalent wind in each district, avoiding anything approaching to a funnel or extreme draught.

Thus we can step out at all hours in any weather or Season, without any ceremony.

ON ARBOURS, OR BOWERS.¹

ARBOURS are a necessity abroad, but even in this country many love such open-air retreats. At Interlaken, last autumn, I saw a very nice natural one, formed by a Plane (*P. occidentalis*); the trunk formed the centre and sole support, and on three sides the branches were trained down to the ground and formed a complete shelter from the sun: four or five persons could sit under it. On the same self-supporting plan, at Spa, I was startled by a huge crimson umbrella of Virginian Creeper. It occurred to me if there had been, in the case of the Vine, two or three plants set originally for the centre support, twined so as to form one stem, a greater height of Bower might have been attained, and strength to bear the weight of the summer growth. As it was, two people could sit in comfort.

One cannot expect deciduous alleys, arches, or Arbours to be strictly symmetrical, or on the perpendicular, at the end of autumn. The young wood requires arranging and curtailings, but, I bethought me how superior such shelters were to the sentry-

¹ *Gardener's Chronicle*, March 6, 1875.

boxes of trellised woodwork one meets with, over which the Creepers never do grow as expected, and which are so often either fresh painted and nailed out of the carpenter's hands, or in a state of dishevelled disrepair. With a real tree, each season only strengthens and beautifies the Arbour. A Laburnum would form in our country a beautiful golden umbrella or Arbour, as likewise would a Mountain Ash. Both are free flowerers and certain fruiterers, easy to train and wattle, and around each Bower there would be sure to spring a perfect sod of seedlings, pleasant to watch, and useful for wattling when the wall gets thin as the tree grows older. Those who love Bowers sit under them, I presume, and had better do so early and late, when the Rowans begin to colour, and so keep in check voracious thrushes. Possibly a tame winged hawk might keep them off, or a well-fed tabby, with kittens, trained merely to blink at and watch the birds. For my own part, I like to see Blackbirds gorging themselves, and struggling, with wings outstretched, to keep their balance on a weakly shoot which they do not intend to leave until every berry is devoured.

Weeping trees of course are all ready and natural for Sun shelters, and have always been used. Planted and grown for Bowery purposes, their position as to Sun and Wind should be particularly considered. Ash and Elm are the best I have ever seen ; Thorns,

Birch, Willows—good Weepers all—would be, I fancy, too small-leaved, and Beech too close in growth. The dark impervious evergreen Bower of Yew for instance, I cannot like. There is always a stuffy, dusty, unventilated air in it, and one pants for the open.

Possible eavesdroppers outside prevent freedom of conversation; and inside are certainly spiders—old grey, dusty ones, that have woven their first, and now know they are in their last web, in that very bower—desperate spiders, made up of eyes and nipping jaws.

In the fresh deciduous Arbour, on the contrary, however closely grow the branches, you can see as well as be seen—can hear all the gentle summer sounds and feel “the air nimbly and sweetly” passing through the leaves (*Macbeth*, Act I. Scene 6).

There the spiders are young and active “spinners in the sun.” Heavy-bodied “White Cross” Arachne (a beautiful insect) makes her web as you sit; and another garden spider, of small body and preternaturally long legs, will harmlessly stalk over you.

True, caterpillars dropping down by their swinging threads, on cocoon “thoughts intent,” may alight on your neck, an unwelcome Eve (*Paradise Lost*, Book V.), but sitters in Bowers must lay their account for such trivial annoyances as insects. Always busy when in the garden, I have never had time to “take mine ease in mine Arbour”

(*Henry IV.* Part I. Act III. Scene 3); but nothing would tempt me into "Fog-houses" or rustic Heather erections,¹ with benches of decaying Pine logs, out of which protrude old rusty nails: or if of sound Fir, then resinous oozings greet you. Wooden houses, like enlarged bathing-machines, are likewise odious, scribbled and whittled over in all directions. When such are the garden Sun-shelters, I think one is better off indoors at once, with wide-open windows, in a comfortable chair.

To sum up these desultory remarks, the best Bowers surely are—

1. A noble tree not far from the house, in the style of the grand Beech at Newbattle Abbey.

2. A Weeping Ash or Elm.

3. The umbrella, or trained and wattled Arbour of a growing tree.

4. The clipped Evergreen Bower (for invalids who must have such close shelter, and no circulation of air, a conservatory or cool plant-house would surely be more pleasant).

5. The purely artificial house of Moss, Wood, or Plaster:

" 'A temple to friendship,'
Cries Laura, enchanted,
'I'll build in this garden—
The thought is divine!'

¹ Such structures are very suitable for glens and woods, or points of view where shelter from a storm or rain may be frequently required.

The temple was built,
And it now only wanted
An image of friendship
To place on the shrine."

(*Author unknown.*)

P.S.—I have had the large "White Cross" spider settled in the baskets of mixed plants in the rooms. If the web was destroyed when we left the room at night, by the morning he had a new one completed in another plant all ready.

"In eager watch he sits,
O'erlooking all his waving snares around.
The prey at last ensnared he dreadful darts
With rapid glide along the leaning line."

THOMSON'S *Seasons*, "Summer."

For an invalid this spider is a most interesting object, and I have never found it to leave the plants, so there need be no fear of its intruding where not desired.

Scotch people are careful not to kill spiders, from belief in the Bruce's traditional insect, it is said.

ON TRANSPLANTING BULBS.¹

It is the understood rule that Bulbs should only be lifted when ripe. This is a very handy excuse for the niggard, and very disappointing to the amateur, who would prefer to carry off on the spot the root he covets. Now it is only rarely that we meet with the methodical amateur who will make a note of the promise, and not forget it, but send the dry bulb at the right season. Most forget all about it until the year comes round, and again they long for the flower, and remember the broken promise.

For fear of mistakes I will name the Bulbs that I know, from repeated experience, will bear lifting and parting when in flower, with common discretion, and under these conditions :—

1. Suitable weather ;
2. Soil in nice working order ;
3. Re-plant at once, and not too deep.

One is apt to bury the full-grown Bulb, the stalks look so long in proportion to the short root. The

¹ *Gardener's Chronicle*, April 5, 1873.

blanched portion of stalks and leaves will, in a day or two, get quite green, and the flower need never droop.

The Bulbs I allude to are Snowflakes, Snowdrops, Crocuses, Scillas, Grape Hyacinths, Narcissus, and Tulips. Of course no risk should be run with a scarce variety of any of these, but with the majority of amateurs it is the common sorts that are most generally desired.

Most emphatically do I protest against Crown Imperials, Irises, and Lilies being parted by amateurs whilst in flower. As to the spring-flowering Bulbs, there is often one out of its place, or you wish to increase your stock, or re-arrange an edging of Crocuses planted with the three colours; and with care this may all be done in safety and certainty as you see the flowers. Choose a calm dull day for the edging, or else the Crocuses will be blown into the line cut out for them, and you lose time setting them up again; and in a still day you can lay down the whole edging before filling in the earth; and that is an advantage, for in spite of the large heaps to work from, you will be short, likely, of the purple and white Crocuses, as they do not increase so rapidly as the yellow, and you may have to come back to the beginning of the edging and thin out a root or two, from nine to the foot, say, to six, so that the whole line be uniform.

Unless planted regularly and thickly, whether in

single or double lines, such an edging has not the effect it should have.

I need hardly add, the large roots should alone be used ; the small ones, that will not flower next season, should go to the nursery border.

Bulbs look best, I fancy, in small groups of from three to seven, but let no anxiety to make up the desired number tempt you to part the bulb if it is not quite ready.

Crocuses one is apt to break off short, if rashly judging by the fine double stalks, and you find yourself with a thing like a little ivory curling-stone in your hand and no root at all. Scillas and Narcissi must only be taken when the young Bulb is quite independent of and rounded like the parent root. Do not try too much if it is ready to separate, nor, on any account, detach the young one, which fits in so beautifully to the hollow or flattened side of the old root.

It is a great help to a Bulb to have its flower cut off the moment it is past its best. The leaves, we all know, must be left. For amateurs, it is not worth straining their patience and saving seed of this class of plants with the exception of Snow-flakes, a scarce Snowdrop, and Scillas.

The seed-pods should be watched of these three varieties, and, when ready to burst, I find it the safest plan to bury the seed, then and there, around the parent. When sown in a pot (it must be done

at once) it is sure to be forgotten or thrown out, but they are quite safe in the ground, as Bulb-beds should only be hand-weeded, and the spade never permitted unless for a thorough overhaul and renewing of everything.

Irises have such scanty foliage, I never know if it is not wisest to leave the flower-stalks to help to ripen the root. My practice is merely to break off the old flowers to prevent any seed forming—almost sure to happen with the English sorts, which merely exhausts the bulbs for no use.

Iris seed takes from seven to ten years to flower, I believe, far too many for an amateur to wait.

My only advice as to Lilies (*Liliums*)—amateurs invariably call *Narcissi* "Lilies," with the exception of *Narcissus Jonquilla* and the Polyanthus sorts, thus creating confusion—is to keep renewing their tallies and to leave them alone.

By no means keep giving gentle tugs to see if the withered stalks are ready to come; leave them literally to the wind, and if you go on disturbing the clumps you are sure to repent it. *Lilium candidum* somehow seems never to rest; there are withering flower-stalks and fresh young leaves coming on at the same time. *Lilium chalcedonicum* (quite a common Lily), takes two years, at least, to recover from a removal. I feel inclined to say that this class of Bulbs is too precious and slow of increasing and recovering, for amateurs to handle at all.

At the risk of making these remarks too long, I must conclude with a warning against lifting Bulbs when in leaf, and as I know human nature is slow to learn by the experience of others, and loves not advice, I will relate simply my fault, the penalty paid for it, and my readers may profit by it as they choose.

In 1867 I was bent on having an edging of double lilac Autumn Crocuses around a bed of China Roses and self-sown Mignonette. It was April; the Colchicums were easily seen with their fine long leaves, and we had just got a new gardener, who, of course, did not know the place of any plant.

We collected the scattered clumps from all the borders; I parted them with the greatest care, not breaking a leaf, re-planted at once, and the circle was completed to my entire satisfaction. The leaves were left to be blown away, and Autumn came, but not one flower. We were disappointed; still they had got a check, but would be fine next year.

I think we had two flowers in 1868, certainly none in 1869 and 1870, a few scattered irregularly in 1871, and at last this past autumn, they flowered well. Five years lost, but I was determined to have patience, at least, and await their recovery; also never again to lift and part Bulbs when in leaf.

HARDY NARCISSI IN THE SPRING GARDEN.¹

FROM the end of March to the end of June one can have Narcissi. There is no one class of hardy early flowering bulbs that have so long a flowering season—not one has so great a variety of form, height, and perfume. They are certainly not grown in the abundance they deserve to be, and I should like to recommend our plan of growing this delightful and extensive tribe of plants in the mixed spring border, as I find it attracts those who are confused by a bed of labelled *Narcissus*.

But I feel sure many more than myself would like to have positive rules for the depth of planting each variety of this bulb. We find here that deep planting gives fine flowers and large bulbs, but few off-sets; a shallower depth gives a much greater number of sound although not heavy roots, and flowers nearly as fine. Is it to secure the roots from frost, that deep planting is recommended by some? In old gardening books one is advised to plant so deeply that autumn

¹ *Gardener's Chronicle*, August 2, 1873.

digging of the borders can safely be carried on without touching the bulbs.

[“Pointing” with the fork must surely be meant, not digging.]

We have a clump of Narcissi in our back row between every plant in that row, which consists of early Rhododendrons, Pæonies, Irises, and Hemerocallis; and in each clump we have the following Narcissi;—Pseudo-Narcissus, which is in bloom with the Hellebores, to the double form of *Narcissus poeticus*, which ends with the Pæonies; *Pseudo-Narcissus*, *Narcissus obvallaris*, *Narcissus maximus*, *Narcissus incomparabilis*, *Narcissus poeticus* and several of its varieties. A few minute cuts off the dead flowers of each variety, as they go past, and the line is clear for the next sort. One day and two nights was the longest blank during the three months of Narcissus in this line, when I had cut over the quantity of dead yellow flowers of *N. incomparabilis* of sorts, and came out the second morning to find the whole line re-starred with that universal favourite the white *N. poeticus*, or “Red-hearts.”

This is a most satisfactory plan, and secures all shades of yellow, and also white, of a height which in spring is not to be had in any other plant.

Of course we only mix those hardy common sorts, and have the rarer kinds in groups each by itself, and, thanks to the courtesy of Mr. Barr, we have got our collection correctly named this season.

In the second line in which are Narcissi (combined with the Herbaceous plants), we have clumps of the less tall sorts—*Narcissus moschatus*, and its double form, *Narcissus bicolor*, Double Daffodils (commonly so called), in all their various sorts; one variety is more like a huge African marigold than a Narcissus—*Narcissus odorus*, in plain English Jonquils, of sorts, large flowered and scentless, and small flowered with their well-known delicious perfume—*Narcissus maclei*.

In the third line we have such delicate beauties as "Queen Anne's" *Narcissus flore-pleno* (where is the single form to be got?), *Narcissus tenuior*, *Narcissus triandrus*, *Narcissus* (Hermione) *gracilis*—this last of distinct and delicate perfume. In the fourth line, we would wish to have in flower, as well as merely the foliage of the dwarf *Bulbocodium* or "Hoop Petticoat" (which is not really a Narcissus, I suppose?) [Oh, yes—ED. GAR'S. CHRON.], and the delicate little *Narcissus juncifolius*; but our Spring border is, I fancy, too good for these last, as they have never flowered well since transplanted from the dry exposed border of light soil where we grow our treasures. *Narcissus minor* and *Narcissus minimus* are also in this fourth line, and are the earliest Narcissi in flower.

In the Spring border we have likewise the different varieties of *Scilla nutans* and *Scilla campanulata* in mixed clumps as well as separately, and the three colours, blue, white, and pink, arrange themselves as to height most agreeably to the eye.

I do not know what we should do without *Scilla italica*, the earliest of the tall Scillas, and the only blue plant in bloom just at the particular fortnight in which it is in perfection. Beds and Borders of Bulbs are very necessary and valuable arrangements for growing them systematically, or as a nursery plantation, but to show off a group of any good Bulbs, or indeed the character of any plant, I do think the well arranged mixed border is the best plan. The French proverb, "*La variété, c'est la vie,*" applies certainly to the eye of the omnivorous amateur, and I cannot conceive a pleasanter task than to have to fill a border for any one of the four seasons, always provided that the said border has been thoroughly prepared in a conscientious manner, so as to last for years, soil thoroughly sweetened and aired by frost, sun, wind, and rain, and no "pointing" having been substituted for the thorough good trenching and digging that was ordered.

I am always reminded of the workers in Mosaic when busy with such a border—a bit of colour here, and a neutral tint there; form wanted in this spot, colour in that; height now the consideration, and now a dwarf plant; light, shadow, and green everywhere, and the whole to have a varied completeness, avoiding, if possible, a ribbony or spotted look. Whilst on the subject of Bulbs, allow me to add my voice in favour of Mr. McNab's long-advocated and practised plan of having soft-leaved early Bulbs

dotted and grouped on grass, such as Snowdrops, Scillas, and Dog's-tooth Violets. The leaves of these are all over by the first cutting of the grass, but for the pulling amateur (curators are not called upon to consider this, of course), the prime advantage is, that you secure having your Snowdrops clean.

It is a great drawback to have to wash these flowers, or else to use them spattered with mould. This winter, owing to the season, we had to rinse all ours before sending them away anywhere, and the beauty of the texture of the petals of a Snowdrop is gone when they have the transparent look given by washing.

For years I could not make up my mind to give up walking on the grass (in the Botanic Garden Mr. McNab had stakes and a cord round portions of the bulb-dotted turf), neither could I trample on Snowdrops; but the bright idea occurred to me of dotting them on the grass-slopes of the flower garden, which suits in every way, and enables the portly amateur to pluck with ease these low-growing flowers.

You wish to save yourself trouble, and send some one to gather such plentiful flowers, as Snowdrops, Violas, yellow or white Lilies (Narcissi).

What is the result? Half the handfuls will have to be rejected. The suspicious clear look of the texture and wave in the outer rim of the petals of to-day will be an undoubted curled up flower to-morrow (directions and lessons given this season are all

forgotten by next year); or, there will be buds that never could expand, and the walks will be strewed with tops of leaves, or the stalks of the Narcissi will be left sticking up above the line of foliage. Now the practised cutter of flowers ought never to be tracked unless in the case of huge Sunflowers, Poppies or Pæonies, which leave holes in the colour horizon.

I was early taught the practical motto, "If you wish things well done (or at least to your own mind) do them yourself;" and I look forward (if I live) to the Snowdrop season of 1874 with confidence and comfort now that they are safely planted on grass banks.

NOTES FOR AMATEURS.—ON SAVING SEEDS.¹

MARKET Gardeners do not always go to the Seed shops for their seeds.

One man will save Broccoli, another Brussels Sprouts, another Leeks, and so on, exchanging with each other, and thus being sure of getting a pure article. Now, I think it would be well for amateurs if they had a similar friendly arrangement among themselves.

Seed-saving is a department of the garden that amateurs could manage better than the gardener, who cannot always find time for this light division of garden labour.

I know one cannot expect to meet with the skill and knowledge requisite for experimenting with seeds; or granting there is the skill, the patience and the means will be wanting to bring the experiments to a satisfactory conclusion.

I would urge on amateurs not to attempt too

¹ *Gardener's Chronicle*, August 9, 1873.

much, to be satisfied with growing one variety of a plant, if the object is to have with least trouble good seed of that favourite variety.

Take Stocks for instance; choose the kind you intend to seed, and if you cannot resist growing other varieties that come into flower at the same time, pull out all the single flowering plants of the kind you do not wish to save seed of; there is no danger or difficulty in this, for of course double flowers are your object in Stocks, and the buds of the single-flowered plants are distinguishable at once, long before they show colour.

Single Wallflower requires more care; our garden has been noted for above fifty years for a particularly fine strain of dark, almost black, Wallflower, and I feel bound in honour to keep up its character; but in a weak moment I was captivated by a beautiful pure yellow variety, grown by Mr. Fleming, at Clieveden, who kindly gave me seed; and although grown and seeded in a different quarter of the garden, it took three seasons to repair that mistake, and get the yellow out of our beautiful dark-petalled, white-anthered variety. I have never admitted a German Wallflower into the garden, handsome though they are, and am content with the old-fashioned double sorts and hybrids. One cannot be too fastidious in selecting the plants for seed. We have a line of forty-five yards of our Wallflower, but a dozen plants are ample to keep for seed. If a plant shows

symptoms of yellow, one streaked bud, I cut off that branch; if the next flowering stalk also proves dangerous, then the plant is pulled up on the spot; better have a blank in the row or bed than run any risk. Mark with a stick your twelve plants, shifting the sticks as a better and a better plant comes into flower; and, when you have made up your mind, then transplant them carefully to their seeding quarter the first suitable day. It is best to save only the centre spike for seed, but if you are greedy, and wish to save the later side branches also, you must lay your account to have two cuttings of the seed, or risk the shedding of the very best seed, which will be in the lowest pods of the first flowering spike, viz. the centre one.

If from neglect you have been too late in cutting over the plants, put a mark where they grew; let the ground be undisturbed, and you will have a fine crop of self-sown seedlings, which are sure to be true. These simple rules hold good for, I think, all Biennials of only one colour or variety which you wish to be extra particular about—Stocks, Lupin, Canterbury Bells, Sweet Williams, Antirrhinum, Larkspurs (we only grow the white ones, and are never troubled with the washy ones, or the whites that come up in bouquets, or in distinct colours).

To have good mixed seedlings of
Poppies, Sweet Peas, &c.

pulling out at once plants of any colour or peculiarity you wish to avoid.

Of Sweet Peas there should be a long hedge in the kitchen ground, sown in separate colours, for the convenience of cutting in quantity any particular colour, and of saving time in gathering the seed—and a short mixed hedge in the flower-garden from which the family should be encouraged to cut their daily supplies, thus insuring that not a single flower be left to form a pod. The hedge will be a pleasing object up to Christmas, possibly (in Scotland our real winter weather is usually after the New Year,) for the young green shoots and tendrils are useful even if there are no pale blossoms.

The common old-fashioned Pot Marigold I have taken great pains with, it is so very useful and showy, and in ordinary seasons flowers may be got in any month, save, perhaps, February.

Ten years ago I got seed from a Manse garden, when travelling through Wigtonshire, being struck in passing with the extra fine orange colour and doubleness of the flowers.

I began to save seed from one flower of one plant. Now we do not require to save seed (unless to give away). There is never a plant with single flowers, and the least double are scrupulously weeded out; but one must not be rash, nor judge of the plant by the first flower, particularly if double flowers are the

object; nip off the doubtful one, and wait for the second and third before deciding.

One season we had a plant or two of a curious proliferous form. I do not know if this is common in the Pot Marigold? [Not uncommon.—ED. GAR'S. CHRON.]

For the front of a shubbery border one could not have a more showy flower by its self-sowing habit; there will be plants of all ages always coming on and flowering; and to have in November and December such a bright well-made flower is very valuable. In water they last particularly long, and are presentable to the very last, from the way in which the petals keep turning down and concealing those that are going past.

We had one season a bed of this Marigold dotted on a groundwork of Purple King Verbena, and all who saw them craved for seed.

The amateur can collect daily, during dry weather, the seed of any plant that is to be saved as it ripens, thus saving the gardener's time; by this plan all the seed gathered will be good. You will save twelve seeds, and may count on raising twelve plants, a result that one only meets with generally in home-saved seeds.

We save nearly all our outdoor seeds, and the half-hardy ones also, such as Lobelias, French and other Marigolds, Tropæolums, &c., &c., and but seldom of the Herbaceous Plants.

We prefer the stray spikes of a second crop of flower ; besides, if it is a free-growing plant, parting the roots is the quickest and surest way of increasing the stock, and if a weak grower, it is safest not to exhaust it by letting it seed ; and for bedding-out Herbaceous plants we prefer to prolong their blooming, and therefore pick off the decaying flowers of Pansies, Violets, *Campanula carpatica*, *Fumaria lutea*, *Oenothera missouriensis*, &c. &c.—A pleasant evening occupation is the cleaning of our seeds. Stocks and Wallflowers should be left in the pod ; nothing like working among them to thoroughly know them. We take the precaution of spreading a white cloth round the table we are working at, both to save the housemaid trouble and to lose no seeds.

Lupins, Peas, Vetches, and such like seeds, are apt to crack open their pods when brought into the warm room, and the seeds scatter out on the floor. When cleaned, put them into their properly folded papers, named and dated.

We spread them on tables in a south, fireless room. Seedsmen keep theirs in the dark, I believe ; but living close to the sea, the air is damp, and we are afraid of shutting ours up.

HINTS TO AMATEURS ON THE PUR- CHASING OF PLANTS.¹

LIKE most other amateurs, I have had to buy my experience as well as my plants, but now-a-days I buy as little as possible, and exchange as much as I can; still, at times, one must buy, for one cannot always resist spending money on plants, and on this account I would suggest the following rules to amateurs:—

An amateur ought to be of a migratory turn, and during the spring, when the winter garden is over, and the plans and preparation for the summer are completed—and when the kitchen crops must be attended to—a couple of weeks is well spent in the south, where spring gardens are more advanced than ours are in the north.

Before starting, it is well to take a run through the nurseries at home and see what is going on, so as to gain an idea of the prices, at home, of plants you are desirous to buy. It is mortifying to go south and buy a plant which you could have got at home,

¹ *Gardener's Chronicle*, August 23, 1873.

carriage free and uninjured by packing, for 3*d.* or 4*d.* less money. No plant is the better for being packed, and to get it direct out of the nursery-ground into your own border, or handed from the greenhouse shelf to your own, is time and enjoyment gained, and the plant is consequently worth more money. Another mortifying thing is to receive plants, in pots certainly, but merely such as have been just potted a few days; or, if established plants, with the cuttings all off; or, if a tree, with the wood fit for grafts taken, or an herbaceous plant, that will neither tear nor cut up into two even, or a bulb, without its offsets.

The amateur should make it plain that he desires to buy the plant as it stands, or not at all; that his object, of course, is to increase his stock the first season, to make something of it, in fact, at once; and, of course, he must be prepared to pay in proportion. If you bring home in spring a bedding-out plant with its cuttings on, you will have a nice little stock of it for the summer, but if you have to put it into heat to get cuttings, you will lose a good part of the season.

It is generally a mistake to buy the cheapest plant, especially if it be one you wish to increase, or to have duplicates of. Just make a mental calculation how many cuttings there are, or judge, as far as you can, with an unturned-out plant, how many might be made of it by parting, and you will

soon come to know when a half-crown plant is cheaper than one at a shilling.

Buy an herbaceous plant or bulb in the clump, and willingly pay more for it. If at a strange garden where you are not known, and the customs of which you do not know, ask for a spade and a bit of matting, and see the plant you want carefully and honestly lifted ; pay your money, and carry it off.

I have often, when I saw I was fairly dealt with, asked the owner if he would not wish to keep a plant, or an offset, and left it willingly ; or the man has honestly asked leave to take off a portion, or stipulated for such before concluding the bargain. This is open and fair. What the amateur ought at once to stand out against, is, having a plant palmed off upon him instead of the clump, as agreed upon.

With seeds, one is at the mercy of the seller. All one can do when ill-served is not to employ that seedsman again who gives you bad seed, and, when well supplied, to keep to that tradesman. I know some people who get their seeds from a different firm each season. A first order, they declare, is always satisfactorily fulfilled in the hope of securing a regular customer. It is well to be able to know when you are well served, and when ill served.

I am far from wishing to make imputations on the trade in general ; on the contrary, I have met with the utmost liberality and honourable dealing ; more like an exchange between amateurs than a

business transaction between a buyer and seller. Many a hint, and much information, have I got on the management of certain plants, and the best way to propagate them, from nurserymen and their foremen, such information being of more value than the plant itself, which possibly one had been in the habit of losing regularly. Where prices are concerned, going about among the nurseries is a great help and check; where there is a scarcity of supply and a large demand, prices naturally go up, and you may possibly get the same plant at another garden for one-third less.

Of course it is hardly to be expected that a nurseryman should give a stranger information about other nurseries even on the opposite side of the road. You must poke about for yourself, and are sure to pick up some information or plant at any and all nurseries. Note down any plant that you find extra good and plentiful in any nursery, even though it be an out-of-the-way or small establishment. Such a memorandum-book is sure to be of use some day. There is no doubt that one's own ignorance is the main cause of one's want of success, and that "knowledge is power" is a saying that holds as good now as in the days of Bacon.

HINTS TO AMATEURS—ABOUT HERBACEOUS PLANTS.¹

AMATEURS are too apt to exhaust a plant to its very last flower, and to grudge cutting over Herbaceous plants. The present (and next month) is an excellent time to increase such plants by division. The soil is warm, and the nights will always be getting longer and more dewy, even should dry weather come, insuring good established plants long before frost and winter set in.

The past spring was a most unsatisfactory season for re-arranging Herbaceous borders—cold drying winds, and no April weather—and, although we took advantage of the only couple of rainy days and got a good deal done, such plants as Aconites, Asters, Delphiniums, Veronicas, Pyrethrums, Coreopsis, are not their usual height, even to the extent of causing strangers to think these two last were varieties of the plants they had.

By planting and thoroughly watering at once, filling the basin round each plant, and before

¹ *Gardener's Chronicle*, September 6, 1873.

finishing off drawing the damp earth round the neck of the plant, and then covering with the dry soil, flagging will be prevented; and although more trouble is taken at the time, in the end, time will be saved as, if sufficiently done, no further watering will be required.

Gardeners are very apt to do all the parting and planting, and then all the watering, but for the amateur of limited extent and number of plants, the water (and a mat) should be ready before commencing, and administered at once.

I like the plants to look as if they did not feel that they had been meddled with; and will never be convinced that they are "none the worse," for flagging and recovering, both operations being a needless waste of the plant's energies, and an eyesore to the watchful amateur.

If not too sorely divided in spring, many plants which have flowered will bear dividing again in autumn, and a year is gained.

Autumn dividing has this advantage, that one then knows what one is about. It is not every amateur who knows a plant when just coming above the soil—or gardener, either, for that matter—but now there is no doubt as to the plant, its height and colour, and no mistake need occur.

Still rarer is it for amateurs to be botanists, and to have dissected and to know plants from their minute feeding sponge-like roots at the end of the

most delicate fibres to the perfect seed, and one need not expect too much from them; but a mass of practical and valuable knowledge will be gained by parting with their own hands (or even superintending the dividing of) the plants in the Herbaceous borders. One is too ready to think on parting one variety of a plant, that all the other varieties must grow in the same way, but practically working with such tribes as Campanulas, *Enotheras*, *Spiræas*, &c., will soon show what an amount of varied knowledge is to be learnt. Running, as well as Tuber-forming roots in the first and last, and the careful unplaiting necessary of the roots of *Enothera missouriensis*, or *Macrocarpa*, for instance; while in *Enothera speciosa*, or *Enothera marginata* they run and come up where one least expects them—I must add of these last, even at times disappearing altogether.

The little *Enothera prostrata*, again, neither runs nor plaits its roots; such checkmates are the best training for the amateur.

There is a lazy mode of arranging Herbaceous plants, which is bad; in the case of jobbing gardeners, I do not know that ignorance is the real reason for so curtailing large clumps, viz., reducing them by paring the outside, thus robbing the plant of its best and healthiest growths. The only advantage of such a barbarous proceeding is that the parent plant remains in the very spot desired, but,

as in the case of Irises, Phloxes, and Asters, the hard woody portions are left in soil that is about as damp and nourishing as ashes, and the fine young growths removed.

Let the centre portion be thrown away, and if a barrow of good fresh mould is not at hand, as it ought to be, to renew the soil, at least let the spot be thoroughly dug, broken up, and incorporated with a spadeful or two of the better soil, stolen from between the lines, to give the new plants a start.

If there is reluctance or want of time to rearrange the places of the plants, let them have this small degree of justice done them: lift the whole large clump and divide into three, planting them in a triangle shape, and let the stake be thrust into the centre exhausted spot. You will be rewarded by a fine healthy clump, which will not take up more room than the original one, and a quantity of good flowers, besides saving the trouble of staking and tying, as the one stake and one set of ties will do for the three plants, avoiding the bunchy crushed-up appearance so common and unpleasing in the Herbaceous ground.

Many plants must be grown in threes, to make any appearance in a back row. What show would one plant of the double Scarlet *Lychnis* make? A most beautiful and troublesome plant to increase.

We have in our mixed border many effective groups of plants; for example, a *Clematis Jackmani*

in rich flower on the wall, in front of it an *Acer Negundo variegatum*, and three plants of the Scarlet Lychnis. In front of this last is *Artemisia annua*, and about the centre of the border is a fine clump of *Lilium chalcedonicum* with from four to six flowers on each stalk (I have never seen seven), and the hoary *Artemisia maritima* in advance of it. Both the Lily and Lychnis are bare and leggy, and the better for the graceful foliage of the Artemisias.

I often get hints for beds or the flower-glasses from combinations in the mixed border. A certain unnamed dark-crimson Antirrhinum and the white *Campanula coronata*; a tall white Phlox, and *Campanula pyramidalis*; a deep rose-coloured Phlox next *Zigadenus chloranthus* always please the eye. This last is for four or five weeks invaluable for the flower-glasses; its light graceful way of growing, and greenish-yellowish starry flowers, combine with everything. The flowers expand in water to the very last bud, and look charming by lamplight.

Ornithogalum pyrenaicum (Bath Asparagus) has much the same colouring, and is equally useful while it is in bloom in June for the glasses. After being erect in water a fortnight or so, expanding all its buds, the flowers do for hanging round the rim of the glasses, as they droop most conveniently, and then turn up the points of the spike. I have never happened to see either the Wheat Lily (so-called in the north of Scotland), or the *Zigadenus*,

used for decorative purposes. I have always to write down the names, and promise bulbs of both plants to visitors.

I am convinced that the complaint of want of flower and show in the Herbaceous border is much owing to the lazy superficial trick of reducing the clumps from the outside; and because a living plant is not a living animal, it is expected to thrive without food or change of pasture. Often and often they simply do not die, but have no fair play or justice, and are discarded with the remark that it "never flowers," or "it is not worth its room." We broke up this spring sundry large clumps of Funkias of sorts, plants of which when wanted we had been in the habit of slipping off from the outside (injuring many a bulb) to save the trouble of lifting the heavy lump. This summer we are having a quantity of flowers, and the divided plants have grown as big as the original clumps, at least they cover as much ground.

As the mixed or Herbaceous borders of the amateur cannot be arranged like a Nursery or Botanic garden, and a cheap tally that will not decay nor be lost has yet to be invented, I find it a great assistance to knowing where each plant grows, to have those that do not die down in winter at regular intervals. Thus all Roses, whether strong Perpetuals for the back rows, or delicate Teas for the front, are so arranged. Also Irises, Yuccas, and such-like growing

plants; again hoary plants, such as *Cinerarias*, *Centaureas*, *Carnations*, *Artemisias*, *Santolinas*, and variegated plants (*Ivies*, *Brambles*, *Syringa*, *Acer*, *Alyssum*, *Chrysanthemum*), form another set of landmarks.

The hoary and variegated plants are generally in front of the *Roses*, as these are devoid of interest when leafless, and the grey plants make a very respectable colour in winter. Thus we have a succession of imaginary beds between the evergreen or woody plants, which are at regular intervals, and the hunting for any particular plant when it is down is reduced to a circumscribed space, and we can always find suitable spots for any novelties that we collect, and seldom have to transplant for such mistakes as setting duplicates together.

Never throw duplicates away, but plant them in reserve in the duplicate lines; they are sure to be of use for exchanging when you least expect.

When replanting the Herbaceous department, finish off with one plant entirely before beginning with another, and always begin with the same end of the border. I know this entails a great deal of walking backwards and forwards, and apparent loss of time; but it is the safest and easiest plan for all that. If called away, cover the roots of any plants left over, with the mat or soil, or set them under a bush. Do not expose the roots to sun and wind, and cause flagging.

I wonder how many thousands of trees are lost to the country in the Nurseries every spring by the workers starting off the moment the dinner-bell rings, even when mats are provided—not taking the thought to throw a covering over the delicate seedlings,—and returning at the working hour to their cast-down handfuls, to find them shrivelled up to straw, quite unfit to lay.

I do not pretend to say that this mode of arranging a border is easy, or that the plan of it is at once understood. If that is what is desired, you must plant out a ribbon border where the first yard will at once show you the plan and plants of the whole length and breadth of the piece of ground. But it is most improving for amateurs to work out their own ideas and fancies. Mistakes are of more use than successes, and why should they be ashamed of them unless repeated, and more than once too? Amateurs have this great advantage over professional gardeners—that they have not “served their time,” and in their teens know everything of such simple matters as working and suiting every soil, and all about common outdoor plants! At thirty, the amateur, if wise, “suspects himself a fool,” and “reforms before he is forty.” At the same age, the gardener is expected to know (and if advertisements are true, believes he knows) everything under and above earth and glass. Let amateurs be thankful they are such, and enjoy their privilege of making mistakes,

and acknowledging the same ; only let them be more in earnest, and get all the wondrous good a garden can do them. Let them feel, as I do myself, provoked (to use a mild word), when told, "the garden must be a great amusement to me." Those who till a Garden merely for amusement or money only, know nothing of its truest value ; of the power this pursuit and study has to elevate and humble, to calm and strengthen, to cheer and soothe, and which enables a garden to fit all states and moods of Body and Mind.

What mere amusement will last from first to second childhood ? That a Garden can do this, is well known.

A PLEA FOR MOSSES.—No. 1.¹

I DO not remember to have ever seen the Mosses in greater beauty than they were in January. Probably owing to the long-continued frost and snow to which we have been of late years unaccustomed, the eye got weary of colour and was ravenous for green (in Botany white is reckoned a colour, and green is none), and the cleansing and fertilizing effects of a top-dressing of snow are very apparent on this class of Cryptogamic plants. Whatever be the reason, they were unusually vivid and fine, and I was stirred up to refresh my very scanty knowledge of them, acquired long ago.

One would think that Botany can only be prosecuted in summer, or at best spring, as it is always in these seasons that beginners commence. Now, I do not think that a Tulip (the first flower given to the botanical student) will be found more difficult to handle and dissect, if the eye has been trained to see and observe the various species of our common Mosses for a couple of months previously. No preparation

¹ *Gardener's Chronicle*, February 13, 1875.

of shining Vasculum, with stiff leather straps and deadly sharp spud, is needful; pockets, eyes, and hands, are all that is required. True, a microscope will alone exhibit certain portions and distinctions in these minute plants; but let us begin with surely knowing those we see with our naked eye everywhere, in the country, in the outskirts of towns, in the most exhausted town-square gardens, back greens, paved yards, boundary walls of stone or brick, or roofs of tile or slates. No town hedge or paling is too scrubby for Mosses, and, in short, there is no excuse for not finding Mosses, if only there is the wish to do so.

The study of Mosses, or other Cryptogamic vegetation, is more likely to make a Botanist, than that of any other class of plants. All the year round they can be studied. If inconvenient to examine them when first collected, they will keep for an unlimited time; even when dried for the Herbarium, sprinkling and moistening will renovate them; and as for travelling, they certainly are the easiest plants to collect and carry about. It is not to be expected that the amateur will ever master every species of even one genus. Of Hypnum alone, there are above ninety species in Britain, but there is no difficulty in distinguishing a Hypnum from a Bryum, a Polytrichum from Bartramia, a Dycranum from a Grimmia, Fontinalis from a Tortula, &c; nor does it require much knowledge to know that we need not look for Sphagnum overrun with *Drosera rotundifolia*

(Sundew), and *Vaccinium oxycoccus* (Cranberry), on the top of a wall, or *Tortula* and *Grimmia* associated with *Draba verna* (Whitlow-grass), and *Sedum acre* (Stonecrop) in a bog, nor *Polytrichum* in running streams with *Fontinalis antipyretica*.

This last is a very interesting Moss, and grows rapidly in a fresh-water Aquarium even when not attached to a stone, but it is best to select a nice tuft growing on a fragment of rock of suitable size for the dish.

All plants look best growing in their natural states and localities; but Mosses lose less than any other tribe when transplanted; and to familiarize oneself with the different species, it is essential to have them actually under one's eye. This is most easily done, and they form, I was going to say, the most beautiful groups for the room. They cannot be killed, are no trouble, bear utter neglect, and cause no mess or litter.

When sprinkled or watered with a fine "rose" (which is all the care they require, even when kept to fruit for identification of a doubtful specimen) the Mosses have their own delightful Woodland open-air smell.

We have had several common Fern-glasses filled with different sorts for weeks past, and they are a constant source of interest and admiration, particularly at night, when the strong light from a green-shaded reading lamp is thrown down on them; then indeed it is like Fairyland, and, of course, one can

enjoy their beauty, without knowing their names or peculiarities, but that is a very curtailed enjoyment.

The first point is to collect them yourself, and then there is no chance of forgetting where and how they grow. One dish, thirteen inches in diameter, contains about two score of nice patches, namely, the largest British Moss, *Polytrichum commune* (Hair Moss), with fine fruit, large enough to catch the eye when walking along the path, and the only Moss whose seed-vessel one can actually handle without a lens. Pulling off the Calyptra or Hood, and exposing the oblong quadrangular capsule or seed-vessel, one finds how wonderfully tough and persistent is the seta or footstalk of Mosses ; they continue standing up, long after the capsule casts off its "operculum" or lid and scatters its spores. The seeds have, however, another protection in the shape of a delicate fringe at the mouth of the capsule, called the "peristome," which comes into use when the operculum has dropped off. Next to this handsome Hair Moss, comes *Hypnum sericeum* (Feather Moss), pressed against the side of the glass, so that the beautiful forked way in which the young portions grow may be seen ; but a grey wall is the place to see this beauty in perfection, and the time now (February) when it is of a bright yellow colour ; the patterns it makes on the stone would be well worthy of being used for borders of papers, "running patterns" on muslins, &c., &c.

It would be well if the unmeaning branching lines and dots and holes of embroidery patterns had "no sale," and Mosses copied from life were used instead, they are so perfectly suitable, and so delicately varied, in their outlines. *Hypnum proliferum*, or *tamaricinum* (Proliferous Feather Moss), comes next.

It is a Moss that always attracts, the distinct feathers of yellow-green rising well above the creeping stems.

One has no right to expect anything real about an artificial flower, but it is this *Hypnum* which is used in imitating Moss Roses.

There are two grand divisions of Mosses; first those that have their capsules at the summit of the branches (terminal); and, second, those that have their fruit-stalks from the side of the branches (lateral).

Polytrichum belongs to the first division, and *Hypnum* to the second.

A fine dark cushion of *Tortula muralis* (Wall Screw Moss) and a bright green one of *Bartramia pomiformis* (common Apple Moss), divide the two *Hypnums* in our dish; both are terminal Mosses and loaded with fruit. The *Bartramia* capsule is round like an apple, that of *Tortula* is oblong. I am always sorry to have to cement or lime our walls and copings, as I love to see them regularly "pointed" with these neat tidy Mosses of softest texture, or a mass of bristles stiff to the touch, according to their age.

After rain, or a heavy fog, one wonders at the strength of these bristles; there will be a drop hanging on the capsule six times its own size and weight, but the sturdy little seta hardly bends: and cob-webs, concave and opaque with moisture, and almost hiding the Mosses below them (which webs, if dry, the naked eye would hardly see), are another set of threads that make one pause and think of the mighty power of little things. Against the sky these cushion Mosses show well, and are most conveniently placed to be seen by sunshine, or in a foggy day, with different but pleasing effects from either state of weather.

The little *Grimmia pulvinata* (grey-cushioned *Grimmia*), is better seen on its wall-top than in the glass dish. It is loaded with fruit, whether ripe or unripe requires a lens to decide, and more knowledge than the mere fact of its being a *Grimmia* requires. Edinburgh is particularly rich in *Grimmias*.

Mr. Sadler states, in a paper read before the British Association at the meeting in 1871, "that perhaps in no district of equal size in Britain, would so large a number of species of this genus be found. At one part of the hill (Arthur's Seat) there is an area of very limited extent, where the whole of the species which occur on the hill can be collected in a very few minutes;" eleven species (besides varieties), including the rare *Grimmia anodon*, first discovered there as a British Moss, and which as

yet, Mr. Sadler told me, is elsewhere only found in Africa !

However, these minute Mosses may not be so attractive to the beginner as some of larger growth. *Bryum ligulatum* (Long-leaved Thyme Thread Moss), is distinct, both in its "elegant tree-like branches and pale green waved foliage" (Stark's *Popular History of British Mosses*—the quotation is I believe a reprint from Smith's *Flora*)—forms a good contrast to the cushions; and next the *Bryum* is a solid ump of *Sphagnum rubellum* (Bog Moss), out of which I had not the heart to draw the little evergreen Cranberry, easier seen now, when the Bog Mosses are not at their full growth.

In July this *Sphagnum* will be in ripe fruit, terminal, and of so bright red a colour, that one has to look close to distinguish *Drosera*, with its fringed edges of red hairs. *Sphagnum cymbifolium*, of long straggling growth, is also not at its best; one can split with the finger-nail its erect-growing capsule, causing a distinct little sound.

The *Sphagnums* form a complete variety to *Dicranum scoparium* (Broom Fork Moss), which reminds one somewhat of *Polytrichum* in its growth and dark green colour; it also is one of the terminal divisions of Mosses, is very common, and has a long beak to the operculum (lid). Two *Hypnums*, *Hypnum Schreberi* (Schreber's Feather Moss), so common among grass, and much used for packing plants when *Sphagnum* is

not to be had, and *Hypnum striatum* (common striated Feather Moss) found everywhere, and a good variety for covering the surfaces of pots, or lining baskets containing plants, as it can be got in large pieces; fill up the bottom of the dish, just leaving room for a little cluster of the pretty "red-tipped lichen" (*Cladonia coccifera*), which one finds in dry portions of Bogs and bare places among the Heather, and a group or two of another well-known and attractive Lichen, *Scyphophorus picydatus* (Fairy cups), frosted and powdered with silver, as it were. Such are the most distinctive contents of Moss Dish No. 1.

In another paper I may note the contents of Dish No. 2.

A PLEA FOR MOSSES.—No. 2.¹

THE drying winds of March have told on those Mosses that grow on Trees, Walls, or among Grass ; but our own in the Glass Dishes, look as fresh as ever, and in damp Woods and on Moors they are still very beautiful.

Many species are now in fruit, which renders the distinguishing of them much easier, and as it is always more satisfactory to note from plants growing in their natural positions, I shall try to describe those collected during the last week of March.

Bartramia pomiformis is lovely now, completely dotted over with its bright green erect apples, and forms a great contrast at present to the other dried-up Mosses on the stone dykes ; but I observed its tufts were generally close up to the top of the retaining Wall, thus getting shade and shelter from the overhanging dead grasses.

Bryum capillaris (greater matted Thread Moss) is also in beautiful oblong, nodding fruit ; the capsules are very transparent, and set on reddish-orange

¹ *Gardener's Chronicle*, May 1, 1875.

setæ—all the fresher when growing among the two little Wall Ferns, *Asplenium Ruta-muraria* and *Asplenium trichomanes*.

A five-inch saucer, with this pair of common Mosses in, is at present, a most "dainty dish" of fruit.

Little curled-up dark green tufts of *Orthotrichum crispum* (curled Bristle Moss) with its minute terminal capsules, catch the eye on trunks of Trees; it is a very distinct Moss—the tufts are usually about the size of a halfpenny. On a stone Wall, among the bright orange patches of that commonest Lichen, *Parmelia parietina*, was the minute *Grimmia Doniana* (Donian *Grimmia*), the whole plant of which does not exceed an eighth of an inch in height, and is of a dark brown ticked with gold capsules; *Grimmia pulvinata* looks quite a large Moss beside it, with its pale yellow seed-vessels safely buried among its leaves (Fur would be a fitter word to use, and very like Mice are the grey cushions of this Moss!).

Walking down a Burn course (the little streams are nearly dry) one commands both moss-covered banks, and the hollows under the roots of trees, where one is sure to find finer specimens of the beautiful *Bryum ligulatum* than those got in January. It might pass for the favourite Killarney Fern, *Trichomanes*, or some exotic filmy Fern.

On the stones which water should cover, are

both the large and small *Fontinalis*. *Fontinalis minor* (Lightfoot) has its capsules "growing out of the ends of the lateral branches which is the most material distinction" between the two.

It grows three or four inches long, while *Fontinalis antipyretica* (Great Water-Moss), is in waving dark masses of eight or ten inches. *Hypnum dendroide* (tree-like Feather-Moss), is a great beauty; growing among the grass and rushes it catches the eye at once, by its thick top of rich velvety green standing erect on a bare stem, tree-like—it seldom fruits; and in complete contrast to this *Hypnum*, is *Hypnum undulatum* (Waved Feather-Moss), distinct in its young and full-grown state, when the flattened and almost white branches are seen trailing down a damp bank. I did not find it in fruit; it reminded me almost of a Lycopod.

In fine fruit on trees and walls, was *Hypnum rutabulum* (common rough-stalked Feather-Moss); the bright little brown capsules, thickly dotted over the large masses of this most common British Moss, make it very attractive; and common also is *Hypnum praelongum* (very long Feather-Moss), not in fruit, but, as I found it, distinct from its very fine, almost hairy appearance, and light green, though it is a variable species.

One great stumbling-block to the beginner, is, the very different situations the same Moss will be found growing in, and of course its character altered

accordingly. On the wet moor just now, *Polytrichum commune* is the most attractive plant, six inches high, with clusters of its stalks terminated with a kind of "rosaceous cup" of a bright red colour; and on a dry bank is the same "common Hair-Moss," too short to be plucked by the fingers, and requiring to be poked out with the point of the knife; true, its bright red cup and well-known capsule are the same.

"This cup is looked upon by Linnæus as the female flower of this Moss, but Heller is of opinion, that it is only the germ or origin of a new stalk which frequently rises from the centre," and which again becomes sometimes proliferous; and this is the opinion of botanists of the present time.

Then again, in a young state, Mosses, like Ferns, give little indication of which species they are, and treasures turn out the most common Hypnum or Bryum, or perhaps no Moss at all, merely Conferva, like the pale green mould one skins off soil anywhere, everywhere.

A lens, possibly, would prove the fact of a seedling Moss, but I am sure, for amateurs, learning first without such aid is best; it will be many a year before they exhaust what should be known and seen by the naked eye. Linnæus, we read, to the last seldom used a microscope; possibly this was a little weakness or boast of the great botanist, but there is no doubt the less paraphernalia the young student begins with, the

better. The want of this, and that, as excuses for ignorance, are far oftener cloaks for laziness and want of application, and we amateurs will learn more by teaching our own eyes to observe, and see, than we shall from erratic poring through a lens.

The ground in an open wood, principally of Fir trees, is covered with large clumps of the dark-green velvet *Bryum hornum* (Swans-neck Thyme—Thread-Moss), attractive in its young state, fitting tight to the soil, and when the handsome pendulous capsule is, as at present, in perfection, the fruit-stalk, though tall, is so slender, that the eye catches the bright-green seed-vessel and misses the seta.

Polytrichum juniperinum (Juniper-leaved Hair-Moss) likes the damp wood also, and is distinct with its arrow-head-shaped capsule standing erect. No bright coloured gemmæ did I find on this *Polytrichum*. Close by, on the sides of the wide open drains, were patches of *Hepaticæ*.

No greenhouse pots can be kept free from the Hepatic Moss—*Marchantia polymorpha*—a real pest, which forms a tight green cake on the surface of the soil, most detrimental to the legitimate plant in the pot; and *Marchantia conica* is of darker green, and grows in larger patches—a most peculiar-looking plant. Tall transparent foot-stalks (some I measured were above three inches long), rising from the flat leaf-like surfaces, some with a black bead-like head (nothing so like them as the horns and

eyes, commonly so called, of snails), and others burst with a yellowish four-sided open sort of flower—hardly possible to lift the patches without breaking the pale, clear foot-stalks, so very short-lived are they when taken home. Although not Mosses, it was impossible not to be attracted by these Liverworts, nor, spreading out my booty on a felled Birch, so as to select the best specimens, could I resist collecting the various Lichens on that single trunk—tight-fitting circles of *Pertusaria communis*, light round the edge, of darker grey in the centre; *Parmelia olivacea*, greenish in colour, growing the same way, and both requiring a slice of the bark to come off with them; large frizzly tufts of *Usnea barbata* (Tree-Hair), and of *Ramalina farinacea*, with flat fronds like stags' horns; *Cladonia deformis*, mealy white horns growing among the others—all so utterly common that thinking of a damp climate and ill-drained land, at once brings before one these particular grey Lichens. On an Oak stump were layers upon layers of *Polyporus versicolor* (Cock of the Woods), a very common woody fungus—according to age shaded in half circles of many colours, from pale lilacs, greys, fawns, browns, to almost black; and growing close to it were tufts of the black and grey horned *Hypoxylon vulgare* ("Candlewicks," as they are commonly called).

After Mr. Smith's "confession,"¹ Funguses are

¹ *Fungi—A Review, a Gossip, and a Confession*, by W. G. Smith. See page 398, *Gardener's Chronicle*.

not likely to be studied by the many; still they will come up among Mosses, to attract one's attention and interest, as well as the Lichens; and while passing among trees, it is impossible not to know, or to escape from, the green dust of that invisible Fungus, *Chlorococcum*—that silent witness against tree-climbing, bird-nesting, fruit-stealing boys.

A PLEA FOR MOSSES. No. 3.¹

It is not likely that Mosses will be sought for by beginners, now that Flowers are in abundance. I shall, therefore, finish off on this subject for the present, with a few that are sure to come across one's notice, even in summer.

Hypnum triquetrum (triquetrous Feather-Moss), a robust common Moss, forms a most elastic seat, growing in dry thick masses, and although not in fruit, is distinct, and not to be mistaken, from the stems being much thicker at the extremity.

This is the Moss one sees at fruiterers, in little bundles dyed of a most unnatural green; it is of a yellowish green even in winter.

Possibly growing among it, is the well known Lichen, *Peltidea canina* (Dog's tongue), rooting through the Moss with long fibres; in winter the large pieces of grey leather-like substance curled up at the edges, which are then of bright gold colour, are very attractive; now it is dry and dull in appearance. On ashes where wood has been burnt,

¹ *Gardener's Chronicle*, June 19, 1875.

or where cinder-heaps for top dressing are laid, is that interesting little Moss *Funaria hygrometrica* (hygrometric Cord-Moss).

In hot, dry, parching weather, its setæ are curled up in a most distinct manner; when damped, they stand erect. It is a terminal Moss, and the bright orange-red capsules look well on the pale-green patches, and catch the eye when found on such burnt-up ground. On bare damp earth in the shade, *Marchantia polymorpha* (polymorphous Marchantia) is now in full fruit, completely different from the *conica*. Its surface is studded with stout stalked little green tables, powdered, and with an edge around.

Hypnum splendens (glittering Feather-Moss), from its shining appearance, is sure to attract in summer or winter; its capsules are not to be found; it loves a degree of shade and is quite common, as is also *Hypnum velutinum* (velvet Feather-Moss), a confusing moss, as it is so very like *rutabulum*—its being of smaller growth is not a distinctive distinction.

Hypnum cupressiforme (Cypress-leaved Feather-Moss) is another *Hypnum* growing in similar situations, very common; and *Hypnum denticulatum* (sharp fern-like Feather-Moss) which fruits in summer and is particularly silky, and of a beautiful light green.

These last are all very common Feather-Mosses, and a handful plucked up at random, off a bank, may include them all.

Long study must it have taken to be able, as I have seen Mr. Sadler, when I have handed him a tangled tuft, draw out at once an inch of *Hypnum splendens* in its young state, and another morsel full-grown—"this is *Hypnum Sericeum*, that is *cupressiforme*;" I consider I have made good progress, when I feel certain and free from doubt, and that some half dozen very similar Hypnums are, any way, not the same species. And here let me acknowledge my obligations to Mr. Sadler, for his patient naming of the many Mosses I have taken to him in my perplexity, and his obliging assistance, which therefore insures the trustworthiness of the names, in these little Notes.

Dicranum varium (Variable Fork-Moss) and *Dicranum heteromallum* (Silky-leaved Fork-Moss), have their terminal fruit in autumn and winter.

They are both much smaller Mosses than *Dicranum scoparium*, and very attractive from their close velvety appearance of dark, (*varium*) and bright green, (*heteromallum*).

Didymodon purpureum (Purple Didymodon) is one of the most common small Mosses, and its reddish fruit-stalks give quite a colour to the ground where it grows in large patches. It is one of the terminal Mosses, and is in fruit now. Although so plentiful, one cannot resist gathering it, when seen with the sunlight through its red setæ, on a turf-topped wall. Common on the wet moors is *Bryum palustre* (Marsh Thread-Moss), distinct, from the green tips of many

of the stems; it seldom fruits, but summer is the time of year for its capsules.

The green gemmæ, or buds, give quite a character to this *Bryum*, which it retains even when dyed.

Hypnum loreum (Rambling Mountain Feather-Moss) grows in long hard branches, on the ground in dry woods, mixed up with other *Hypnums*.

Trichostomum lanuginosum (Woolly Fringe-Moss, one would take for a *Grimmia*. I only found it in small patches among stones, but it grows by the acre on the Highland mountains, "forming an elastic grey carpet."

Here I will stop. Having, since commencing this paper, been myself to Belvoir, to see once again the beautiful Spring Gardens, and going weekly to the Rock Garden at the Botanic Garden here, to try and catch the endless collection of plants as they come into flower, I find my own thoughts turning from Mosses for the time, and there is no doubt winter is the most likely season to impress the beginner with a love of such flowerless plants. For summer, seaweeds are perhaps the most tempting Cryptogamic tribe, and very fascinating is it to dabble in the cool rock pools, and exciting to catch the tide as it "stands" for a few minutes before it turns, and your chance of some choice species, to be found growing on the stalks of the tangle, is over for another fortnight, or, possibly, a month, until next low tide.

Allow me to recommend a taste of the Algæ—

olive, red, and grass-green seaweeds—during the hot months, which will prepare for a glance in autumn at the most evanescent branch of Cryptogamia, the Fungi. Such a plan reads like a wretched smattering of all, ending in nothing; but any one plant that is gathered with one's own hands, watched and studied, never to be forgotten, although its name may be, is a fact complete in itself if no further prosecuted, or a firm stepping stone to an endless galaxy of facts, if, as is most likely, "appetite will grow by what it feeds on."

And let not the earnest amateur shrink from being called a smatterer, but accept the title as another certain fact, at once, and for life.

MOSSES.¹

JANUARY 1 being a brilliant calm day, I determined to devote its five hours of good light to a review of the Mosses within reach that I had collected in 1875.

Distant Spring-heads on Hill-sides were beyond my time, and *Hypnum filicinum*, *Bartramia fontana*, and similar sorts could not be overtaken. Rainy days had also filled the burns, so my favourite plan of walking up the centre of a rivulet, thus commanding the high banks on each side and Water-Mosses under one's feet and by the edges, was also out of the question. Nevertheless, I collected one *Bartramia*, three *Bryums*, three *Dicranums*, one *Didymon*, one *Fimaria*, sixteen *Hypnums*, two *Grimmias*, four *Orthotrichums*, four *Polytrichums*, two *Sphagnums*, and two *Tortulas*—a total of thirty-nine; and four of these I had not previously found in fruit. Another object I had set for myself, was to find the fruit in its different stages, on those I had been too late for in 1875. Thus, the first day of 1876, I made sure that no time should be lost of this year so far.

¹ *Gardener's Chronicle*, January 29, 1876.

The great advantage of collecting for one's self was very apparent in such a hurried foray, as I knew exactly where to find each sort, and not a minute of light was lost. Those who know the charm of having an earnest quest in hand, are sure to remember the precise spot where the quarry was hunted down, or a prize (to them) first discovered, no matter what the object of pursuit or discovery be—a red deer, or a butterfly, *Rheum nobile* or a tiny *Grimmia*.

A slight hoar frost on the sedgy meadows impeded my search there, so after a snatch at *Hypnum dendroides* I left the undrained land until the sun had licked up the beautiful frost patterns, and hied me to the Woods and sunny turf-topped "dykes." How pleasant it is to tread on the elastic pine needles, no longer slippery, and how convenient the low winter sun, letting us get on double quick in the search for Moss fruits. To be sure you are blinded at times, but the most incorrigible grumbler never complains of the winter sun, and a step east or west puts the trunk of a tree between you and it. Invaluable as is a Herbarium (I believe), and impossible as it is to do without books, what comparison is there, between the quick living information gained in collecting specimens this bright winter day yourself, and after picking out extraneous matter—dead leaves and withered grasses—arranging them to your taste, or in families, on a table, in strong lamp-light, and taking "a good solid think," like "friends

in council" over them all. What a contrast, I say, to the dried-up Herbarium specimens, and to the unexact amateur mind. Would these lovely feathers of *Hypnum proliferum* be recalled by such a popular (so-called) sentence? as "Stems tripinnate, leaves serrated, papillose on the back, the cauline ones cordato-acuminate, striated with a nerve running nearly to the point, those of the branches more ovate, with a single or double nerve at the base," &c. It is difficult for the beginner to believe that colour and size go for nothing in proving the "who's who" of a plant, and that a description like the above should be sufficient.

Here we see *Polytrichum aloides* on the peat-topped wall, with its bright crimson *calyptra*, is only proved by its subglobose capsule, but there is no doubt the coloured coverings of these seed-vessels are very attractive at present. It is much easier to detect the fruits now when the sun slants low, and gets through the bare trees. Only one fruit did I find on *Hypnum proliferum*, plentiful as were the masses of this Moss.

After such a day of careful summing-up of one's small knowledge, one feels more clear and ready for fresh acquisitions in the coming season.

A New Year's Day forces one to review many a subject, bitter and sweet; I found a long wander in the Woods and Fields, among the Mosses, helped one greatly to see things, straight and true.

A PLEA FOR WILD PLANTS. No. 1.¹

THERE is a prejudice against the Umbellifera, they are poisonous, (witness *Æthusa*, Hemlock, &c.). They are merely culinary plants (*Angelica*, Celery, Fennel, Carrot, Parsnip, Parsley, &c.); they are a difficult tribe to know.

If you ask the young student for a name, you are put off with "it is one of the Umbellifera," and the veteran shelters himself with the excuse that his botany has got rusty, or that the plant is "not in a fit state to name." I am convinced that a thorough acquaintance with this class of plants, acquired when the memory is retentive of knowledge, would make all plants with conspicuous flowers quite easy to the young botanist, and be a good preparation for the study of the Grasses—a class sadly overlooked. It is such an advantage to master one confusing family at the beginning, and not to put off all difficulties to the end.

There is, perhaps, no tribe of herbaceous plants

¹ *Gardener's Chronicle*, April 25, 1874.

that supplies us with such a variety of foliage for so many months in the year.

In January we find the fresh young leaves of *Chærophylum sylvestre* (Cow Parsley), months before any Fern unrolls its young fronds, and when, with the exception of that persistent flower, Chickweed, there is positively nothing in flower. Soon the little *Draça verna* (Whitlow Grass) bristles on the tops of walls; *Mercurialis perennis* (Dog's Mercury) and *Lamium purpureum* (Red Dead-Nettle), with its tops of soft purple bloom, give interest to the hedge-bottoms, but the *Chærophylum* is first.

It is no small recommendation that this class of plants affects the outskirts of towns, waste places, and rubbishy corners, unpromising ground for the collector; or is found under trees where, with the exception of a carpet of Wordsworth's favourite Celandine (*Ranunculus ficaria*), nothing flowers.

It must be owned it requires a positive conviction that the plant wished for is there, before plunging in the height of summer growths above one's ankles into Nettles, and up to one's waist in umbelliferous plants, thistles, and intolerably hooking burrs; but now (April) one sees where one is going—Nettles and grey stars of Thistles, are equally harmless and close to the ground—this last seemingly retaining for itself a larger share of air and moisture on its hoary, greedy leaves; and the various clumps of *Scandix odorata*, *Conium maculatum* (Hemlock),

and *Chærophyllum*, are then in the perfection of freshness.

It is very improving to learn to distinguish them in their young state, before the tell-tale bags at the base of the leaf-stalk of *Heracleum Sphondylium* (Cow Parsnip) are developed, or the spotted stems of the Hemlock, or the concave flower-head of *Daucus Carota* (Bird's-nest), or the edible roots of *Bunium bulbocastanum* (Pig-nut), are formed, and before the long-beaked seeds of *Scandix Pecten-Veneris* (Venus's comb) serve to identify the plant.

Most unenviably difficult to please, must those be who are not attracted by the groups seen now: young plants of *Scandix odorata*, with white variegation at the base of each pair of light-green decom-pound leaves, associated with the simple dark green Lily-of-the-Valley-like leaf of *Allium orsinum* (Garlic), or the halbert-shaped *Arum maculatum* (Lords and Ladies), the little gold Celandine forming a groundwork under the scraggy trees, with an occasional flower, almost entirely white.

On the other hand, by the sandy margin of the River, is again the Myrrh, making foliage for the pinkish club flowers of *Tussilago petasites* (Butterbur), as yet devoid of its huge Rhubarb-like leaves; then in a dry, exposed spot, is a patch of closely-fitting *Scandix Anthriscus* (small Hemlock Chervil), and under a Hedge, this same, most beautiful of the Umbelliferæ, represented by fine plumy plants of

brightest green and finest division, is dotted through a large mass of *Lamium purpureum*, which has now lost much of the soft velvet bloom of its tops, but is in profuse flower, its bright orange anthers, and delicately spotted throat, are well worth noticing.

Not far off, the stronger growing *Lamium album* is plentiful. I always think plants of the class *Didynamia* should be held downwards; the upper whorl of the White Dead Nettle, has its anthers still black, the lower story of which, being longer exposed, are yellow, both most attractively dotting the white upper lip. *Egopodium podagraria* (Goutweed) is everywhere. It is probably the least interesting of all the Umbelliferae, and is a fearful pest in the garden—(N.B., let not a variegation hobby induce any one to admit the variegated form into a border)—still, its smooth uncut bright leaves are pleasant to look upon, especially as I saw it with the cut leaves of *Tanacetum vulgare* (Tansy), and *Potentilla anserina* (Silver-weed), and small seedlings of Cow Parsnip.

Through a Bramble-covered bank, thinly leaved, one can at present see the fresh tufts of *Hypericum pulcrum* (St. John's Wort), the blue-green *Antirrhinum linaria* (Yellow Toad Flax), the delicate shoots of *Vicia cracca* showing its first tiny tendrils.

Geranium Robertianum (Herb Robert), *Geranium dissectum*, and *Geranium molle*, all three with red stalks and crowns; and how beautiful are the leaves

of *Geranium molle* when held between you and the sunlight! so thickly clothed with soft down, they look as if frosted.

How different is this plant in such a position, with shelter and loose soil, its foot-stalks some five inches long, and in the hard open field, laid down in grass seeds; then this *Geranium* fits closely to the ground, and spreads out star fashion, like *Sempervivum montanum*. There are patches of seedling Umbelliferæ, that one almost takes for *Thalictrum minus*, or *Adoxa moschatellina*, only one is surprised to find this particular patch without flowers. One is never weary of admiring the little green Moschatel, with its four-sided head of flowers, and a fifth at top, that being the first always to expand. The beautiful foliage of *Fumaria officinalis* (Fumitory), the pointed leaves of *Achillea* (well-named *Millefolium*), *Lathyrus pratensis* (Yellow Vetchling), *Stellaria holostea* (Stitchwort), *Vaillantia cruciata* (Mugweed), and *Galium aparine* (Cleavers),—these four last-named plants have not yet began to climb up by anything they can lay hold of to support their weak stems. The *Galium* is not so adhesive as in summer. *Tormentilla*, *Myosotis*, *Sherardia arvensis* (Field Madder), *Epilobium*, &c.—all will be choked up by summer time with the mass of bramble arches treacherously rooted firm at the tips, and ready to trip up an intruder. Such a trip-up, however, is not to be regretted, if it gives one a hint how to propagate

some select garden variety, troublesome or hopeless, by cuttings, grafting, or seed.

So pleasant is it to recognise one's old friends in their first spring freshness, and so varied and beautiful in foliage, are many of the plants here named, that one hardly values as one ought the first white tops of *Erysimum Alliaria* (Jack by the Hedge), or the half-opened pink *Lychnis dioica* (Campion), or the first pair of flowers on *Veronica Chamædrys*, *Veronica agrestis*, and *Veronica arvensis*. *Veronica Beccabunga* is not in flower, and is still temptingly like watercresses; but there is one, *Viola canina*, and a flower of *Glechoma hederacea* (Ground Ivy), and the little Wild Strawberry.

Broom, in a sunny spot, has a few blossoms, but one admires the pale green leaf-buds, regularly set on the dark-green stems like beads; the brown velvet Whin buds are in a mass of flower, and so is the leafless Sloe. The early *Tussilago farfara* is now in cottony-leaf, and full erect Dandelion-like seed; just here and there a bright yellow flower is left, and a few are nodding, not yet ripe enough to stand erect on their scaly stalks. *Draba verna* is also in seed.

A thicket of *Salix helix* is a most beautiful object; there is such variety in the different stages of its male and female flowers—soft lilac catkins ticked with scarlet, gold, and black, up their slender length, according to the time the anthers have come out. *Salix caprea* also is still in beauty—the “Saugh” of

Scotland, and Palm Willow of England; but handsome as are its catkins, and earliest of all, they are not to be compared in beauty with those of *Salix helix*, or the large soft grey flowers of *Salix purpurea*, which show so strikingly on the fine purple-barked twigs. But I will not trench on the Willows, a tribe of trees, far more confusing to the botanist, than even the Umbelliferæ are to the amateur.

It would be a well-spent spring, if a score or two were mastered; three hundred, I am told, are in cultivation in Nottinghamshire.

I must bring to a close these Notes on the commonest Weeds, gathered up in a walk on very common ground; but I was so forcibly struck by the fact, how much more one saw now, when all plants are on a level, so to speak, and have a fair start, than in summer. They are spread out like a mass before one, and very good is it to probe one's memory, and take note of one's ignorance, marking those plants (you must know them) which you do not recognise at present, and returning in summer to identify them, being prepared to find them a new lot of Umbelliferæ to puzzle over, and such plants as *Symphetum*, *Epilobium*, *Doronicum*, *Digitalis*, *Rumex*, and grasses choking up the weaker growers, seen with such interest now.

A great charm of the Umbelliferæ is, that all the season through, there are young seedlings coming on; thus you have beautiful fresh leaves.

It has always struck me this family would make a good addition, or substitute, for what in Covent Garden parlance is vaguely called "Fern," and the small leaves of even the larger growers can be used intact. I cannot bear to see the waste and destruction of the perfect fronds of such-like Ferns, as *Aspidium Filix-mas*, *Asplenium Filix-fœmina*, the tips of which are alone used for certain decorative purposes. Might it not answer to sow seed of Umbelliferous plants in bare places, and under trees (rookeries) where grass has been tried, and failed? It would insure a beautiful green undergrowth at the barest time, from January to April.

It is easy to cut over the flower-stems if they are an objection, but seeding should be encouraged for a year or two to secure a succession of young plants; and in the openest spots, plants of *Heracleum giganteum*, &c., would have a grand appearance.

Of the numerous garden varieties suitable as leaf-plants, I shall make some remarks later on in the year, when I can prove from memoranda that beautiful foliage can be gathered every week in the year, from this family alone.

As a conclusion to this paper on Common Weeds, let me recommend an uncommon winter and spring nosegay, and one from which the amateur will learn much, and that at present has daily growing interest. Have a bunch of twigs of all the forest trees you can get, in a jug of water in your room, and simply

watch their buds swelling, bursting, unfolding, and expanding their leaves and flowers. I am in the practice of cutting off a handful of such twigs monthly, keeping each month's supply by themselves; and most interesting is it patiently to watch and compare their various and varied progresses, from the end of January to April. It would take a long paper to note all one sees with the naked, and alas! ignorant eye; but it is a capital plan by which to learn a little of the different ways, in which the leaves are packed and folded inside their numerous coverings—from the thick, leathery, scalloped, outmost scales of the Walnut, or sticky ones of Horse-Chestnut, and Poplar, to the softest smooth ones, lying closest to the tender leaves.

Pleasant is it to stand under a bursting Sycamore, or Horse-Chestnut, and almost hear the cracking of the large buds, and be covered with the pretty pink bud coverings of the one, and be stuck over with the resinous husks of the other. But more improving is it, to have the buds under your eye from day to day. By this means one realises (so far) the wondrous rapidity of growth in spring.

We are all acquainted with, and talk freely of, the rush of the Arctic summer at the Poles, and of the tropical growths after the rainy season in the Torrid zone; but of the amazing bound, that takes place under our own eyes every Spring we live, we are grossly ignorant. I have simply not been believed,

and by country friends too, when exhibiting the gross young shoot of a Horse-Chestnut, and from a later tree a similar bud, out of which this marvellous growth of shoot (above a foot in length) and pairs of leaves has issued. Still more startling is it, to observe the commencement of the new bud for next year, at the base of the new-born leaf, not above a fortnight or so, old, as these few days are sufficient for this huge leap into active life. To the amateur, only "seeing is believing" in such a case.

I will not add another word at present, but hope, for their own sakes, some may gather themselves a Tree-nosegay, and this very Spring be a little less ignorant of "common things," *i.e.* of wonders that may never be understood, possibly, by them, but which, nevertheless, any—even the faintest—approach to them, enlarges the mind and heart, for then there must be deep, and humble admiration, of the amazing workings of Nature, obedient to the Great Creator.

A PLEA FOR WILD PLANTS. No. 2.¹

BEING mortified at finding myself uncertain as to one or two common wayside plants, in their undeveloped states, I resolved to refresh my knowledge amongst those by the Seaside, and also on Moor, Bog, and Hill—catching them before they were in flower—for there is no doubt that it is unworthy of an earnest amateur botanist, to trust to the mere flower, to clear off all his doubts and difficulties.

In spite of the mild winter, this past May was favourable for my object, and by the shore the plants were not so far on as usual, and the same with regard to the upland district I went over during the very first days of June. In this paper I will keep to the seaside. The first plant I came to was a fine lot of *Geranium lucidum* (Shining Crane's-bill) two yards square, quite distinct in its transparent red stalks and clear shining look ; and a little further inland was *Geranium pyrenaicum* (Perennial Dove's-foot, Crane's-bill), more confusing, and a variety one likes to see the small-cupped blue-purple flower

¹ *Gardener's Chronicle*, July 18, 1874.

of. Quite in the sand, *Erodium cicutarium* (Hemlock-leaved Crane's-bill), there never can be any doubt about, as its long, narrow, sharply pinnatifid leaves, lying flat upon the ground, are completely different from the round foliage of the two former, or, I believe, from any of our native *Geraniums*. Of this I found only a single flower on three different plants, but all three were white (with unequal petals, the two upper being shorter than the three lower ones).

Is the white variety of a plant usually earlier than that which is of the normal colour? The white variety of *Geranium Robertianum* is always first in our garden, where we grow this *Geranium* for its beautifully-shaped leaves.

The white varieties of *Sisyrinchium grandiflorum* and *Ribes*, Hawthorn, and Horse-Chestnut occur to me as earlier than their respective red and yellow varieties.

In a patch of *Ajuga reptans* I have found the white spike in bloom while the rest of the patch was only in bud; true there were other blue patches not far off fully expanded.

I had to search for *Thalictrum minus*, the dark purplish tops of which were just protruding above the sand, and to which the long blanched roots first found led up. Then came *Ononis repens* (Rest-Harrow), more viscous and less foetid than when showing its pretty pink Pea-flowers; and *Lotus*

corniculatus (Bird's-foot Trefoil), with bright red buds; no yellow visible as yet. The prettiest of all the Hieraciums, *H. pilosella* (Mouse-ear Hawkweed) was in plenty, but one missed its neat sulphur flowers, red-streaked in bud, or when shut up in the afternoon.

In the chinks of the rocks, at times wet with the sea spray, were tufts of *Plantago maritima* (Sea Plantain) and *Statice armeria* (Thrift), the type flower-buds as yet stalkless.

The young botanist is always attracted by the fact about this, "the most humble and most lofty of plants," as Lightfoot describes it, viz., that it is not found in intermediate stations, and only on the sea-shore or on the tops of the highest mountains, and feels puzzled when he finds *Polygala*, *Tormentilla*, and *Thyme*, &c., in conjunction with it on the sea-shore, but looks in vain for the Thrift very high up hills, where these three are in abundance. The fine small herbage was all so extra short, that I could not find either *Polygala vulgaris*, *Linum catharticum*, *Astragalus arenarius* (?), or *Anthyllis vulneraria*, and must go back to see if they are lost to that particular locality; or if I require the various coloured flowers of the Milkwort, the small white flowers of the Purging Flax at the top of each slender branch, and the bright purple, or yellow clusters, of the last two Vetch-like plants.

Elymus arenarius (Sea Lyme Grass) with blue

green sharp leaves rolled inwards, and the tall flower stalks of last year still on, were also found here.

The honey-smelling *Cochlearia officinalis* (Scurvy Grass) was in full flower, those patches that were not luxuriating in the sand, being of a purple tinge all over. Yet still further down on the shore, growing in the dry pure sand, was *Arenaria peploides* (Sea Chickweed) with its square juicy tops; no white flowers open. It is mere folly to single out any one class of plants as more suited than any other to its particular position, for all, of course, are fitted for their natural situation; but in our humid island, Succulents do strike one as most remarkable—the thick fleshy leaves supplying themselves, with all the moisture they require, only waxing thicker and cooler, and more glistening, the hotter and drier be the weather.

Seasons like the present, I may remark in passing, will teach many things to the amateur; their two favourite practices, raking too much, and watering too little, (surface work, in short,) must be avoided; and the value of properly, and deeply-worked, ground, and mulching (where that has not been practised), will be very apparent, even to the prejudiced, who think neatness the beginning and end of good gardening.

The cultivation of Succulents will get a great impetus, and also, I hope, that of Scotch Roses.

Here, in the poor sandy soil, were *Rosa spinosissima*, and four other Briars in bud, sufficiently far

advanced to expand in water. We have a large bed of the cultivated double, and semi-double, sorts, of these delicious little Roses.

They have more perfume than any of the grand Hybrids or Teas, short lived as they are. The bushes (three feet high) are loaded with flowers, grow in the poorest portion of the garden, require no tying or pruning, no solid or liquid manure, and have not a caterpillar, or aphid, about them. This, however, is owing to a famous colony of sparrows—above thirty nests—which we left undisturbed this season in a high Ivy-covered wall hard by. We usually take their eggs twice in the spring, and find one brood fully sufficient to cover our Pea rows and peck every pod, and in spring, we are provoked at the destruction of our Yellow Crocus edgings, and of our Mossy Saxifrages, or Sedums, which they pull up for their nests; also the Sand-baths, that go on in our seed beds that are not netted; but this year we are envied by all our neighbours, for our freedom from insect pests, and for the comparative cleanliness of all our Roses.

The little Yellow Stonecrop, (*Sedum acre*) was also well covered up in the sand, but was not in bloom, though *Saxifraga granulata*, with its tall stalk and fine white blossom, was in beauty.

The double variety of this Saxifrage, makes a lasting patch for the last lot of plants to flower in the spring border, but is still better placed among grass,

where one does not miss its quickly dried-up leaves, and its roots will only roll about and be spread, not lost, as is likely to happen on the bare soil. It is useful for cut flowers, but beware of pulling up the whole plant, when gathering it. It is possible to mistake the tubercles, for those of the Celandine—yellow faded leaves and exposed grain-like roots, are now all that is visible of that earliest, and always welcome *Ranunculus*.

At least two species of *Atriplex*, Sea Spinach, or Orache, were promising to cover a large portion of the sand; they belong to a very unattractive family, as to good looks. *Silene amœna* (Sea Campion) [*S. maritima*], was beginning to trail on the beach, also *Polygonum convolvulus* (Black Bindweed). Up from the shore a few yards grew *Campanula rotundifolia*. One is apt to overlook the distinctive ground leaves when plucking the slender Blue Bells, with long narrow stalk leaves, two months hence. Shining green *Galium verum* (Ladies' Bed-straw) had not a vestige of its yellow flowers, but there was a suspicion of white, visible on the close-growing *G. procumbens* [?], and the little hairy Tare (*Ervum hirsutum*) was full of its minute flowers.

The great wild Valerian (*Valerian officinalis*) had come to its height, but was not in bloom; and *Symphetum officinale* (Comfrey) was exhibiting some of its yellowish flowers. These two large growing plants were in a dampish piece of ground, where a

Burn ran into the sea ; there, also, grew the little *Cerastium aquaticum* (Marsh Mouse-ear Chickweed). Handsome fresh tufts of *Senecio jacobææ* reminded me of the pretty Burnet Moth (*Anthrocera filipendulæ*) one was always sure to find in this spot (Dalmeny, near Cramond), its gay, yellow and black-headed and spotted caterpillar, matched safely the golden flowers of the Ragweed, on which also this lazy Moth clings in numbers on a dull day.

Silene inflata (Bladder Campion), not in bloom, stunted specimens in lilac flower of *Valerianella olitoria* (Corn Sallet), and a *Papaver dubium* or two, with red hairs at the base of the scarcely-formed flower-buds, gave promise of the fine blaze there will be, in the neighbouring corn-fields presently, from whence these three last plants had strayed. A few Cowslips, and another nodding flower, *Geum rivale* (Red Water Avens), were also observed. We found also fine leaves of *Angelica silvestris*, the only Umbellifer in this walk not alluded to in my April paper. "Well content with our stroll along six miles of coast, we took coach," as Pepys words it, "and so home to my musique and then supper . . . which did please me mightily."—(*Diary*, 1660-61.)

A PLEA FOR WILD FLOWERS. No. 3.¹

WITH a knowledge of the common plants growing there, one can go over a Dumfriesshire bog, or marsh, without getting "deep into the mire," or even dirty, nevertheless this long drought made a hunt after bog plants, an unusually cleanly matter; not that mud, or a wetting, would for a moment prevent me getting a specimen required, but it is not unpleasant to find pools so shrunken, that one can reach *Menyanthes trifoliata* (Marsh Trefoil or Bog-bean) with a long arm, and a firm grip of a tuft of rushes. So distinct a plant does not require its beautifully fringed flowers to identify it, but as a stalk of pink buds was within reach, I felt I must have it, to put beside its three-lobed leaf.

Saxifraga stellaris (Starry Saxifrage) I was very glad to find in flower, as otherwise I should certainly have missed it among the stones by the river bank. The last time I gathered this distinct Saxifrage, was on the top of Queensberry Hill, some six miles off, and about 1,500 feet higher (2,259 feet is its

¹ *Gardener's Chronicle*, August 1, 1874.

elevation). There was no fear of passing over the light green tufts of *Pinguicula vulgaris* (Butterwort), although its lovely violet flowers were tightly tucked up, and like the Bog-Bean, its fringed, or rather hairy mouth, was not to be seen. In a still portion of the river, *Equisetum limosum* (the Smooth Horse-Tail), like miniature Bamboos, stood erect with their black oval spikes, and by a dry ditch, the graceful *Equisetum sylvaticum* (Wood Horse-Tail) was in great beauty, although its elegant drooping tiers of green leaves were not at their full extent, as those of *Equisetum arvense* (Common Horse-Tail), growing in a clay field, were—this last being the commonest and least interesting of the three. Now that Mr. Ware of Tottenham has introduced *Equisetum sylvaticum*, grown and exhibited in a pot, these peculiar plants will come into fashion, and be known by those who cannot see such flowerless vegetation, as they walk along.

Passing through a Bog-meadow (a very different thing from an English one)—and which may possibly be safely in rick by September!—*Orchis maculata* was in finely spotted leaf, and the queer *Listera ovata* (Great Tway blade), its large single pair of Plantain-like leaves will attract, when its insignificant flower-spike might be passed by. I longed for the sweet-smelling Butterfly (*Orchis bifolia*) to have been in flower, but only got its pair of smooth unspotted green leaves. The whole meadow was bristling with the erect-growing *Rhinanthus Crista-galli* (Yellow

Rattle) with serrated leaves, and a labiate flower (set on one side of the stalk).

Carduus palustris (Marsh Thistle) at this stage of its growth, about eight inches high, was a beautiful object, and was the most picturesque plant on the ground, dotted singly here and there, and beautifully set off with dark spines everywhere. Later, this Thistle loses its fine proportions, and being almost unbranched, looks a drawn-up plant, with crowded small purple cluster of flowers at top, very inferior then in effect, to that commonest Thistle, *Carduus lanceolatus* (Spear Thistle). *Ajuga reptans* (Bugle), creeping and rooting at every joint, but carrying its blue flower-spike well up, was abundant.

Another labiate, *Prunella vulgaris* (Self-Heal), was not so far advanced, its purple whorls of flower growing in the same way five inches high in the wet meadow, but close to the ground in the barren pastures hard by.

The pretty purple lilac *Geranium pratense* was just bursting into flower, and the eye was at once caught by the flat lemon Globeflower (*Trollius Europeanus*)—"Luckangowans" as they are called in Scotland.

Commarrum palustre (Purple Marsh Cinquefoil) was growing by the side of a ditch, with trailing woody polished stems, and distinct pinnated leaves, the leaflets, five or seven in number, in graduated pairs, the odd one at the end being the largest. Its dark-brown flowers, or calix rather (for in this

plant that portion of the flower is the largest), were not formed.

I must own it is a comfort when one plant forms a whole genus, as this *Potentilla*-like plant, or the *Trollius* (Buck Bean) or *Oxalis*; and it is wise for the young student not to fix at once what genus a plant belongs to, before examination, and go on hammering with a prejudged idea. Why the *Commarum* is not a *Potentilla*, and *Vaillantia* not a *Galium*, and *Lavatera* not a *Malva*, and why *Orchis*, and *Ophrys*, are different, it is well to distinctly learn at once.

Valeriana Dioica was in plenty, and bearing several heads of flower, both male and female, the latter being much the smallest. When in seed this plant is very beautiful to examine closely.

Caltha palustris (Butterburs, or cups) will soon make a fine show—King's Cups, I have heard them called in Yorkshire (East Riding); but misdoubt Cowper's Huntingdonshire "Villager" being tempted into any such wet "yellow mead" to "gather King-cups." Far too muddy a task for her to clean up "her sportive train," after.

Pedicularis palustris (Marsh Lousewort) at any stage is easily known, with its fine frills round every portion—stalk, leaf, calix—setting off the bright pink flowers.

The tall thin *Lychnis flos-cuculi* was in profusion, but not one pink Ragged Robin was in bud.

Senecio aquaticus (Water Ragwort), at this season of a fine purple hue, was very attractive; but a month hence, when its handsome loose head of yellow flowers expand, and it is at its full height, the dark hue will have dispersed to a great extent.

I left the Meadow with regret, for it was in an unusually pleasant state to traverse. Winding my way to a Peat-bog through a natural wood of Birch, and Alder—the shoots of this last, from cut-down stools, quite young, and of a rich chocolate colour—I came on sundry blue mists of *Hyacinthus non-scriptus*, on two occasions, with a white one among them. It must be owing to the soil, for the blue is of a much deeper shade in this district than is usual in these Hyacinths. *Bunium bulbocastanum*, now in full flower, dotted through the mosses, was a very light addition. The charming well-known *Oxalis acetosella* (Wood Sorrel), was in abundance, the leaf easier seen and better known than its delicate lilac-striped white flower, with a yellow spot at the base of each petal; and that earliest grass to flower, *Anthoxanthum odoratum* (Vernal Grass) was already pleasant to smell. The Peat Moss was white with bunches of *Eriophorum polystachyon* (Cotton Grass) and *Eriophorum vaginatum* (Hare's Tail Rush); its single broad tuft is the softest of the two, and makes a very nice cool pillow. The faded *Sphagnum*, was red with the interesting little *Drosera rotundifolia* (Sun-Dew),

which one had to look very close to see, as its fan-like leaves, set round with red hairs, were just beginning to grow, no foot-stalk, or spiral flower-stalk, being yet visible.

Kneeling to examine the Sun-Dew, my eye caught a flower of *Vaccinium oxycoccos* (Cranberry), like a microscopic, pink, Turncap Lily; the crawling little wiry stems, with small dark leaves, require the flower or the fruit to assist the finding of this lovely trailer. The waxy pink flower buds, tipped with green, of Bilberries (*Vaccinium myrtillus*) were just ready to open. The largest Bell-Heather (*Erica tetralix*) had downy grey round flower heads, but there was not a vestige of buds on the other common Heathers, *Erica cinerea* and *Vulgaris*. *Narthecium ossifragum* (Bog Asphodel), in foliage and growth like the dwarfest Iris, was in plenty—the flower stalk not yet up.

In the drains, was floating the broad-leaved *Potamogeton natans*, with no green flower spike to be seen, but with leaves very shining and glossy; and masses of Duckweed (*Lemna minor*), with pin points of gold inflorescence seen when the Sun shone on them, otherwise almost too minute for the naked eye. Through the green mat spikes of *Epilobium tetragonum* (Narrow-leaved Willow-Herb), grew up, not in flower, an awkward-growing *Ranunculus flammula* (Lesser Spearwort) with long spaces between each thick narrow leaf, and no flower; and only one or two white stars on the very pretty Ivy-leaved

Ranunculus hederaceus, which covered the bottom of the drain. Growing up the sides was *Galium palustre* (White Lady's Bedstraw), not as yet in bloom.

Stepping up three or four feet on to a patch of reclaimed ground, I came on another set of plants— weeds of cultivation, *Galeopsis tetrahit* (Hemp-leaved Dead Nettle), not a quarter its full height, with a beautiful sulphur flower with purple lower lip, not yet even in bud. Nor were there yet in bloom the Polygonums—*Polygonum persicaria*, with black-blotched leaf, *Polygonum aviculare*, with varied shaped leaves and *Polygonum amphibium*. The Nodding Spurry, (*Spergula arvensis*) was coming on, and common Plantains, the whole lot making better progress, than the miserable little plot of Potatoes.

Following the course of a little Burn to the low land, *Veronica beccabunga*, the darkest blue of all the wild ones, was in good flower; *Myosotis palustris* was just in bud, and *Mimulus luteus* a mass of yellow.

The rising generation of botanists, will hardly believe this is an outcast from some garden, so rapidly has it run in the last twenty years, to my knowledge, from burn to burn in this (Kirkpatrick-juxta) and the neighbouring parishes.

On the wooded "Banks" at Raehills, down to the Kinnel River, were large masses of these favourite Ferns, *Polypodium dryopteris*, and *Polypodium phegopteris*, the first in most delicate fragile beauty, and the second with its distinct, drooping, lowest pair of

pinnae,—no fronds of either Fern at their full growth. *Luzula sylvestris*, that excellent Winter-garden plant, was in abundance and still in flower, although over with us near Edinburgh. Hardly distinguishable from the fine grasses, was the light-branching *Melampyrum sylvaticum* (Yellow Cow-wheat), its pretty blossoms all growing on one side of the stalk; this was merely in bud. *Sanicle*, with its shining dark green leaves, glossy below, is so like a Geranium that it is well to find it this month (June) and in flower, its round little balls of pinkish-white bloom, settling the question at once.

The lovely little *Orobis tuberosus* (Wood-Pea), was scattered here and there, budding and fading too rapidly; also another Pea much less attractive, *Vicia sepium* (Bush Vetch), and Woodroffe (*Asperula odorata*); Dog's Mercury, so prized in February, was in seed, bearing a pair of hard little balls on each slender stalk; and on the rocks in the bed of the river was *Hieracium murorum* (Wall Hawk-weed), one or two yellow flowers of which were expanded on the loose panicle, and a pair of most untaking plants, grew suitably close together. Had they been in bloom, it would not have made them more pleasant; although the dark puce flower of *Stachys sylvatica* (Hedge-Nettle) is beautifully marked and barred with white in the lower lip, and that of *Scrophularia nodosa*, (Figwort) is well protected with its little helmet-shaped blossom, of no particular

colour. *Geranium Robertianum* is now, also very offensive. *Digitalis purpurea* (Foxglove) clumps, are growing tall, and a purple hue about all the stalks shows there are no white ones among them. Seed of light varieties scattered about, greatly improve the look of the common purple, as in three or four years there is a great variety of shades produced.

The vegetation of the grassy Hills about Moffat, is very backward this season: *Tormentilla*, *Polygala*, of all three colours, Pansies purple and yellow, were scattered about. At the edges of the sheep drains was the pretty Yellow Pimpernel (*Lysimachia vulgaris*). The flat-topped *Chrysosplenium oppositifolium* (Common Golden Saxifrage) was still in flower, and not suffering from the dry season, which surprised me. *Alchemilla vulgaris* (Lady's Mantle), small and stunted, had a dewdrop actually on one or two leaves, and in a choice spot *Pinguicula* had several open flowers. Unable to resist, I scooped up two or three tufts for a friend's Fern dish, which I knew was already full of *Sphagnum*, awaiting "treasures," and attached to these plants, were a few tiniest specimens of *Drosera*, not so far on as those in the Peat Moss, but visible against the light-green *Pinguicula*. How they both thrive and feed I shall hear in time, for a larder was also in readiness, and experiments to commence at once!

Pteris aquilina, was found only in tight loops through the grass, so firm, that they broke when one

tried to unbend them, and see which end was the root. In many places where the Brackens were further on, they were, I observed, browned with the frosts. *Saxifraga hypnoides* was in flower near the summit, but very dry, and more like those in our Spring border, than when growing in its native spot. A quantity of Parsley Fern (*Allosporus crispus*), on the contrary, was in the freshest beauty, the whole face of the hill consisting of loose stones, and the Ferns luxuriating among them, the only green patch on the dry hill. It is one thing to see these three small Ferns I have named, in their native localities, and another to see them when stuck into red flower-pots. Determined to carry off a good clump for my friend, without using spud or knife, I removed stone after stone until the mat of roots (not merely those of the Fern) came away of itself in a mass, leaving behind a burrow large enough for a hill-fox, or coney, at least.

Down again by the river (Annan), where there are some nice still pools, running up from its banks, the very pretty and interesting *Ranunculus aquatilis* (Various-leaved Water Crowfoot) was on the surface, and preparing to bud; but as it did not yet require the peltate leaves to support the flower while ripening its seed, the hairy water-leaves were only at this time seen; next month the whole pool will be white with the blossoms, a large spot of yellow lying at the base of each petal. The common Chara was lying lazily

at the bottom ; it is far prettier in gently running water, which keeps it free from mud, and as it were combs it all the same way, swaying gracefully with the ripple, and one can see the fairy-like plant, with ease. *Arundo phragmites* with broad blue-green leaves, *Juncus* and *Carex* of sorts, were also here to be found, but none of these were in flower. On the dry light land by the river was the soft downy *Anthyllis Vulneraria* (Kidney Vetch), just bursting, and Thyme with round grey flower-head—none open.

We are much warned nowadays against violent contrasts, in shape or colour, in the garden. All is to be gradual, and toned down. But here are groups noted on the spot, that must satisfy the eye (for Nature always does that), and yet they go completely against some of man's stereotyped rules:—

Foliage Alone.—Clump of Sword-leaved Iris, Round-leaved *Caltha*,¹ Fern-like Meadow-sweet, Bracken and Foxglove, Commarum and *Carex*; *Tussilago petasites* (largest native leaf), Tansy and *Avena sterilis*.

Colour in Masses.—Pink Lychnis, Yellow Rhinanthus; Pink Lychnis, Buttercups; Purple Geranium, Yellow Trollius; Purple Vetch, Yellow Lathyrus; Pink Lychnis, White Stellaria; White Cotton-Grass, Red Sorrel; Thyme, Crowfoot, and Cistus; Foxgloves,

¹ The double variety is most useful for the Spring border, and well worth the good soaking it, and Trollius of sorts, require during this dry season.

Meadow-sweet; Hyacinths, White Umbellifer; Forget-me-not, Green Pond Weed; Purple Self-heal, Buttercups; Blue Scabious, Orange Hieracium; Yellow Galium, Blue Campanula; Yellow Mustard, Red Poppies; Yellow Tormentilla, White Galium; Purple Thyme, Blue, White, and Lilac Polygala—a charming mosaic; Pink Lousewort, Golden Caltha. I had better end, with Daisies and Buttercups.

ON ARRANGING CUT FLOWERS. No. 1.¹

THE following Notes, are the result of many years' experience in arranging Cut Flowers in Glasses, from three inches to three feet in height, from January to December. I have often been asked for such a memorandum, and will be glad if any of your readers get hints, or escape from the failures, most have to go through before they succeed; nor let them consider these remarks insignificant, and the minutiae unnecessary; our Flowers last much longer than those of our friends, and the Glasses require changing much less frequently.

Our Glasses are of the simplest shapes, clearest glass, and most free from ornament that I could procure, at Dobson and Pierce's, and Naylor's shops. Nothing should draw the eye from the Flowers—although as I wandered last autumn through Salvati's tempting warerooms at Venice, I made my mind up, that such glass, would be the best substitute for Flowers. It is a morning's work to gather, clean, and arrange foliage and flowers, for seven to ten

¹ *Gardener's Chronicle*, May 11, 1872.

Glasses, therefore, in cool weather, I must have the water, still perfectly clear on the sixth day, and in summer, to the third. Those Flowers that speedily spoil the water, should be kept by themselves, and that Glass can be cleaned, but it saves trouble to mix only those plants, that stand for the same length of time fresh. It is far better to learn to collect your Flowers yourself; no gardener can bring you in, the exact quantity, length of stalks, &c., you will soon know you require, and they are all, naturally, very extravagant where buds are concerned. The Flowers must, or ought to be, cut before breakfast, unless sharp frost, or heavy dew, or rain, render doing so impossible; but to cut Flowers at noon with the Sun on them is waste of time, for the Flowers do not last.

My first object has always been to make a pleasing effect with what are called "common Flowers" and "Weeds," but I do not admit that, properly speaking, any Flower can be "common," or any plant a "Weed." The very refinement and delicacy, of Wild Flowers, render them most short-lived when gathered. Grasses—I use the word in a popular, not botanical sense, and include Sedges—of course, are different, and from Bulrushes, to the little quaking Briza, are essential.

To use the plants, as far as possible, in their natural habit of growth and peculiar character, is my aim.

I have seen Ferns, *Felix-mas* and *Felix-fœmina*, half

broken, to make them hang round a high glass ; why not use a Fern, or other plant, that droops naturally ? And, on principle, I would forbid cutting rare plants, or injuring any plant. Amateurs are sure to cut Camellias, with long stalks, or a fine truss of Rhododendron, without any consideration for next year's blooms ; and I have seen a bouquet, at a flower show, get a prize, that was set round with sprays of a Gleichenia ; to my mind that bouquet should have been disqualified, by the use of a Fern, so difficult to keep, and so scarce.

I shall begin with the finishing touches to the Tall Glasses, as I have always observed that, to be the weakest point in arrangements. A Glass three feet high, must have some Trailer round the stem ; without it, the best nosegay will look like a broom at the top, and, with a Trailer, even Evergreens will have a good effect. For all the year, Passion Flower, *P. cœrulea*, is the best ; nicely ripened young laterals, cut the length you require. I like the tendrils and flower-buds (which expand in the room) to reach the table, and the tendrils naturally tie the different pieces any way you require. For winter, *P. quadrangularis* I find the best, and it will do for two weeks successively.

Another winter Trailer (all dust sponged off) is *Stauntonia latifolia*. I have never tried it when in flower, as it would waste some of the deliciously-scented bunches, which we have in profusion now ;

this is a far too-little-grown Greenhouse Creeper. But the most useful family of plants, of all, for winter, as they can be grown at any time, and need never be spared, are the Tradescantias. We use six varieties ; Zebrina, and Argentea, for dark purplish striped leaves, and Lindeni, which is green ; there is also a white variegated one, but it is apt to " sport," and two small-leaved green ones, which I first saw grown in quantities, in Germany, and Holland, for hanging baskets. All these hang from one and a half to two feet, down from the Glass, and do not interfere with the Trailer that is twined round the stem of the Glass.

I myself have never got Ivy, or Bramble, flexible enough for a Trailer, and have seen them tied in with a stout string at the bottom of the Glass, and ready to jerk out at the top. In summer the Variegated Vitis, is beautiful ; the clear pink stalks are seen through the glass and water. And then comes the Bryony, *Tamus communis* ; we use the male plant for its leaves, and wait until September to cut the female plants, when the berries are the full size. By cutting them green they colour in the House all shades of yellow, orange, and scarlet ; and I have had them, when good unbruised sprays, in use until February. Of course the Leaves had all turned their different shades of bronze and yellow, shrivelled, and been cut off ; but the Berries keep plump and glossy long after the stalk has got so brittle, it will

turn no longer, then the short bunches do for the Flat Glasses.

I cannot praise Bryony too highly for this ornamental purpose. Although not indigenous to Scotland, it fruits here as finely, as in the hedges in England. We grow it in a circular bed inclosed with a wire frame five feet high. The tubers I had marked in the hedges in Yorkshire, and had them sent down at the proper season, and they must now be a great weight.

The only care it requires, (and it is essential if you count on cutting good pieces for your high glasses) is to twine it daily, or as often as need be, on the wire, to prevent it twining round itself, when it is sure to snap over, if you try to disentangle it; therefore it must be caught at the first, and watched until the wire is properly covered, then it waves about as it likes. The leaves of the male plant are the most useful, and it produces more delicate little Trailers, very useful for Mr. March's and small glasses. In training it, care must also be taken to turn it its own way; at this moment I forget if it is from left to right, or *vice versa*.

Dioscorea discolor stands, or, I should rather say, fades well. *Smilax sarsaparilla* is the best winter plant for going up the stalk of Mr. March's glasses; its little hooks keep the sprays in position without the use of worsted, wire, or thread. Many other Trailing plants have we tried for the Glasses,

but all had some fault—discolouring the water, or only keeping a couple of days fresh, or not keeping in water at all, such as Hops, *Bryonia dioica*, &c., &c. The next point I would notice, is Foliage, for all the year round, which there is no doubt, as Mr. Brittain remarks, is “always deficient.”

ON ARRANGING CUT FLOWERS. No. 2.¹

Foliage for Winter.—All Evergreens must be well washed, stalks and all; there is no end of nice little dust-bins, and collections of old flies, among the leaves. Of Hollies (all useful) I particularly like the "small-leaved serrated silver edge," and "*ciliata minor*," and when I get fine berried branches of the larger sorts, I cut out their leaves. The weak inside sprays of Holly, or to cut from bushes that are choked by other shrubs, make the most useful and graceful pieces for glasses. No use looking at a pruned Holly (or any pruned Evergreen) unless, for short white, or gold pieces, from the heart of the bush. A stiff well-grown branch, with thick stalk, just fills up your glass at once. The varieties of Holly are endless, and very beautiful are the different forms and growths of the spiny edges of the leaves, all bearing closest inspection, and therefore very suitable for glasses; *Arbor vitæ*, and Rosemary, last long; *Mahonia Aquifolium* does not, although beautiful when the whole leaves of a branch are got perfect.

¹ *Gardener's Chronicle*, May 18, 1872.

Garrya elliptica looks another thing when well washed, and I find the only cure for the dust from its catkins is, after shaking them well, to dip them into water, otherwise the yellow farina covers books, table, and all it is near; they make a very good fringe for Mr. March's glass.

Acuba japonica, *Ruscus aculeatus*, and *Ruscus androgynus* are excellent, and for dark green, Yew,—weak sprawling pieces. *Pernettyas* are invaluable for their berries; *Pernettya rigida* and *Pernettya mucronata* are excellent substitutes for small-leaved Myrtle, and from the way they grow, they form a good support for small short flowers, which you may dot among them. By February the leaves of *Chaerophyllum sylvestre* are long enough for the shallow glasses.

I cut the plants below the soil, and wash off all earth; when set in the Glass they are the exact shape you wish, and which you would be long in forming from single leaves. Mixed with Snowdrops, and *Ardisia crenulata* berries, they make an admirable Flat Glass. By March, some of the leaves will be long enough to go round the Tall Evergreen Glasses, and droop down, just above the Tradescantia trailers.

The following are some of the Umbelliferous "Weeds" we use from early spring to autumn,—of course the two first are always taken for Ferns, only they shape themselves still better, and turn the

second week, before they wither in the least, to a delicate yellow white, which looks beautiful by lamp-light.

Chærophylum sylvestre, *Scandix odorata*, and *Scandix anthriscus*, most beautiful and useful of all; *Bunium bulbocastanum*, *Athamanta meum*; the small umbels of these, dotted sparingly, give a very light appearance to a glass. They must not be too far expanded, as then they scatter their minute petals, which are troublesome to brush off a table. On the Continent, for the same effect, they universally use a species of *Gypsophila*, but that is a scarce plant in this country.

The *Ferulas* are, I should suppose, all valuable; *Ferula asparagifolia* has this recommendation, that like Myrrhis, and *Davallia elegans*, it fades in delicate shades of yellow, without decaying, and has the clean wiry stalk of an *Adiantum*—a great point for a finishing-touch plant. The common kitchen-garden Fennel, of course, can always be had, and looks well. The *Thalictrums* are another tribe, most valuable for Foliage.

Thalictrum minus, or *adiantoides*, which we got true at Messrs. E. G. Henderson's, and the wild plant of the same name, that grows in the sand by the sea-shore here, are beautiful for Small Glasses, and there are three stronger growers we use for the High Glasses. Of *Spiræas*, we use the reddish young shoots of *Spiræa bella*, the short erect leaves

of *Spiræa Filipendula*, and for the Tall Glasses *Spiræa Aruncus*, and *Spiræa Lindleyana*. These last, if taken too young, are very apt to curl up.

At the suggestion of Mr. McNab, more than twenty-five years ago, we became aware of the value of *Spiræa japonica* for forcing. He advised us getting into a stock to force and rest, like Lily of the Valley. Now, Covent Garden is full of it, and everybody talks, and writes, of *Hoteia japonica*. It is a plant ornamental in all stages; the young leaves, bronzy when unforced, look well with *Scilla amœna*, and the old flower-spikes come of use in latest autumn, when one is glad of any little variety of shape. The unripe green seed of the wild Meadow-sweet has a good effect. *Orobis vernalis*, *Orobis angustifolius*, and other Vetches, supply very useful light foliage, as also the Epimediums. These last have lovely leaves. Of the Everlasting Pea, one can always find a few pieces in winter, if grown at the bottom of a wall, or where it has got through the roots of an Evergreen.

Perennial Lupin I also find very useful for either High or Flat glasses.

Solomon's Seal is most beautiful for winter foliage (forced), and lasts longer cut, in water, than in pots. In mid-winter we had it in a glass by itself, and merely picked off the flowers as they faded. At present we have a lovely Glass—fronds (if I may so use the term) of *Myrrhis*, single *Narcissus moschatrus*,

single red Tulips, and a few pieces of Solomon's Seal.

Corydalis lutea is another beautiful Small Glass foliage-plant, but its yellow juice must be dried up before putting into water. *Fumaria claviculata* is the most delicate Trailer I know for small glasses.

The green flowers of *Alchemilla vulgaris*, and *Alchemilla conjuncta*, I use as long as they are to be had, but I have never hit on a plan to show off the beauty of the satin underside of the leaves of *Alchemilla alpina* and *conjuncta*. Leaves of *Alchemilla vulgaris*, alternate with those of *Heuchera*, go well together. I use the *Heuchera* leaves, every week in the year; they show off every colour, and are most beautiful in themselves, seen with the light through them. Its insignificant flowers I find useful in all sizes of glasses, when I am short of Grasses. *Achyrocline Sandersoni* is most useful in winter for a grey spike; it stands much longer than *Santolina incana*, or leaves of any of the *Centaureas*, or *Cinerarias*. A Hoary leaf, is always some sort of colour in winter. Of *Artemisias*, we use two green, and five grey varieties. Of Brambles, leaves of *Reticulata*, and *Laciniata*, we find useful in winter, and have in most seasons abundance of leaves, but not one, in twenty, is perfect. *Helleborus foetidissimus* has no smell in winter; it is the darkest green we use for flat glasses, and the only Hellebore leaf.

Sweetbriar, whether forced or natural, keeps longest by itself. It seems to kill what is mixed with it, and there is no drawing out anything, from among its prickles. Common single Feverfew, from its lively green, is useful for low glasses. We grow a plant in an out-of-the-way corner, and have seedlings all sizes. We cut and use them, as I described when alluding to the *Chærophyllum*. Ferns, and Ivy, are so universally used, that I need not allude to them.

To conclude, as regards Foliage, it is my rule, without exception, never to leave a leaf on the stalks, that can reach the water, all are stripped off above water-mark. All Evergreens, when the Glasses are being cleaned, that are to be used again, are rinsed well and the stalks wiped, no approach to slime is allowed to form ; then the bunch is whisked round and round like a mop, until no chance of drip is left, and all leaves or buds that incline to fall, do so at once, and there is no littering of the table afterwards. Leaves, or membranes that sheath the stalk, must be removed, as in Irises, Grasses, Symphytums, and Lily of the Valley ; even Crocuses will keep much longer, if the filmy skin is peeled off which encases their stalks. Hips, Holly, Ivy—green, black, and yellow ; Privet, black and yellow ; *Pernettya*, *Ardisia*, red and white ; *Solanum capsicastrum*, and other fleshy Berries, will keep much longer if allowed to steep overhead a while in water, when they show

the first appearance of wrinkling. *Arbutas*, Snow-berry, *Solanum*, and such-like clear watery berries, (I use the word in its popular sense, and the "gelid race of berries," strawberries, &c., are nothing of the sort) will not bear this treatment.

To mix in winter with the last *Chrysanthemums*, we use the expanded seed vessels of *Iris foetidissima*, exhibiting the beautiful orange seeds; also, when split open, the flat silvery seed vessels of *Honesty*—the orange calices, inclosing glossy berries of the same colour as *Physalis Alkekengi*—a plant, however, apt to run through a border, like that other useful winter plant, *Tussilago fragrans*, so we grow them near each other, with a hard walk between them, and without any border. The old flower-spikes of *Spiræa Aruncus*, and *Lindleyana*, are of a rich brown colour, and we use them to give variety of shape to the winter nosegay. *Jasminum nudiflorum* lasts longer and is more perfect when cut in bud and expanded in the room. *Solanum Jasminoides*, is a most useful winter plant, and when you can get it with its dark blue Berries and its pure white Blossoms you require nothing else in that glass. In late summer we have *Hypericum androsæmum*, of which we grow a quantity for its capsules; they ripen from green, through brown, to black, in water, and the branches grow in the most convenient shape, for a Large Glass. The dark-blue and white balls of *Scolymus* stand long, as do the involucre of *Eryngium*. I have always failed in

getting our native Sea Holly to live any time here. Willows we are very fond of, and the catkins come at a useful time ; *Salix caprea* (male), and a small wild one with thin black catkins, for small glasses. *Carex japonica* (the Variegated, is the variety we have) is the first grass-like plant to come into use in early spring. *Carex Fraseriana* is too scarce to cut, but its white flower-spikes are very beautiful. The common *Luzula silvestris*—a plant which we use largely for the winter garden—comes next into flower. Mr. March's Glass, looked well with this combination—brown leaves of *Heuchera*, blue Pansies above, *Narcissus nanus* below, and the Rush flowers dotted through, two or three long stalks going up the glass stem. Grasses, are the surest mode of toning down a Flower glass, and taking off the formal, or flat shape, some tastes affect.

In a thorough Bedding-out garden, the plants in one bed will be from cuttings struck the same date, to insure perfect symmetry, and in the early morning you will see strong men picking off every leaf, and truss, that is above or below the inexorable line of beauty fashion has laid down ; and this plan is too often carried out, in the Cut-flower glasses—always where the journeymen have that department. As most gardens, nowadays, have a corner for "ornamental Grasses," I need not take up your readers' time by naming them. If used sparingly, no variety looks ill, but as the leaves of all Grasses fade much

sooner than their flower-spikes, I draw these last out of their leaf-sheath.

As a general rule for Large Glasses, I fancy two sorts of Flowers look best in one Glass ; and here are some combinations I have not seen elsewhere. In Winter one is thankful for anything. Two or three spikes of *Tritoma grandis*, despised when *Tritoma uvaria* is to be had, are a prize, and do well with white Chrysanthemums.

By February, *Laurestinus*, and *Rhododendron Noble-anum*,—a truss of the last will almost always last two weeks ; by this means, when too dwindled away to use for the Long Glass, the two or three bells left mix nicely in a flat dish with *Helleborus olympicus*, or *orientalis*. These Hellebores are useless, if cut in the bunch ; they flag at once in water, but cut each flower, with its own inch of footstalk, and it lasts long.

ON ARRANGING CUT FLOWERS. No. 3.¹

Foliage for Winter.—Of Bulbs, I am most chary of Hyacinths. There is a peculiar sour-sweet smell, which comes on suddenly, long before the eye detects the commencement of decay; in fact, they still look well in a Tall Glass, but, of course, are quite inadmissible.

The great comfort of Bulbs is the facility with which they can be drawn out, and fresh ones slipped in, without disarranging the glass.

Pæonies, "Vinegar Roses," as they are called in Germany, succeed the Rhododendrons, Bulbs, and Doronicum. We only cut the common double red and pink, which fades into white; they grow with the most convenient bend of the stalk, which is sure to fit either one side, or the other, of the glass, and the stipules suit also exactly for foliage. A few yellow *Hemerocallis flava*, or *Narcissus poeticus*—the best Narcissus, I think, single or double—look well with them. *Delphinium formosum*, with *Tellima grandiflora*, or *Spiræa Aruncus*, or the yellow *Aconitum*

¹ *Gardener's Chronicle*, June 8, 1872.

Anthora, with a few stalks of a Gardener's-Garter, I got from Mr. Salter, very superior in all respects, to the common variety in gardens.

Poppies (*Orientalis*), with straw-coloured Irises, or *Spiræa Aruncus* and *Avena sterilis*, which I prefer to cultivated Oats.

Dark-blue and Straw-coloured Irises, with Poppy-buds, and, perhaps, one expanded bloom. Aaron's Rod, with *Valeriana pyrenaica* shaded red and pink, come in their turn.

Roses fade so soon, that only on special occasions have I time for them, but *Coupe d'Hébé* and *Lilium candidum*, with Myrrh leaves, and a Passion-flower in bloom, for a Trailer, are perfect.

The first branches of *Fuchsia Riccartonii*, which we have never lost hold of, both against a Wall, and large plants in the open border, are in time for the second week of the *Fleur-de-lis* glass. Scarlet *Lilium Chalcedonicum* and the black *Veratrum nigrum* or *Spiræa*.

When only one or two blooms are left on the Lily stalk, they do for Mr. March's glass, with the short pieces of *Veratrum*, obliged to be stripped off the long stalk used in the High Glass.

Gladiolus Brenchleyensis, and *Agapanthus umbellatus*. The Gladioli expand so well in water, that we cut the whole spike, and when only one bloom is left on the top, like the Lilies, it descends to Mr. March's glass; and the *Agapanthus* is treated like

Rhododendrons, and looks well in single blossoms, in the sand, to the very last ; dwarf double Sunflowers, and Dark-blue *Aconitum chinense*, *Tritoma uvaria* and *Agapanthus*, or *Aster Bessarabica*.

Herbaceous Asters are sadly neglected, not only for autumn borders, but also as Cut Flowers. They last very long both out of doors, and in. We grow seven varieties for cutting from. I snip off the leaves and fading flowers, after the first week, and then they go on like Everlastings.

Well on to five months, we have Asters. If there is appearance of a gale, which batters far worse than frost, it is well worth securing a large bundle, and keeping them in reserve in the house ; they all suit either high or low glasses. I saw at Mr. Saunders's wonderfully interesting Place (near Reigate), *Aster turbina* grown in pots ; it had a very light appearance, and attracted me at once. Asters look well, with any colour of Chrysanthemum, and as yet, there is nothing approaching to a blue Chrysanthemum, even in a Florist's Catalogue.

Pyrethrums I must not forget. Single ones, look best, and I do not scruple to mix in, a pure white Ox-eye Daisy, and fawn-yellow Chrysanthemum, both also single, if need be.

Were I not keeping to Flowers that last long in water, I would recommend a High Glass of Carnation Poppies, double Flame-coloured, and White, single Black, with pure White stamens, delicate Pinks, with

their own grey-blue foliage, and lots of buds in all stages, and Bryony for a trailer; but it would stand only one day, and must be in an opaque Glass. The great delight of using common Border Flowers is, that you have them always in their natural season; and I like to know the month, and pretty nearly the day of the month, by the Cut Flowers in the Drawing-room. There is a constant variety also, for two weeks will about exhaust an ordinary garden's supply of any particular Summer Flower. Most cordially do I agree with Mr. Britten, that there is "an overplus of flowers."

Sweet Peas must be renewed the second day; they look best with their own green—nice tendrily pieces, which will last for several supplies of the flowers. We have them in distinct bunches of the three colours—White, Scarlet (so-called), and darkest Purple—in one glass, but if fresh they look well any way. Mignonette, unless forced, or consisting of late autumn sprigs, must be in a glass by itself and changed daily. Single Roses, last longest for this reason, that if cut in bud they will expand in water—such as the old-fashioned Portland Rose, Single Scotch (two sorts), Persian, or Burnet, and you may count on them, for three or even four days, but the fine Hybrid-perpetuals or Chinas are done on the second day, and must to my mind be fresh. There is a blueish tinge, one detects at once, on a second-day Rose, and, in fact, they should be

renewed daily. There are Glass Stands, with small glasses, that hold each, one fine Rose, and I am sure such would be useful in summer. A very few minutes would cut new Roses, and the water would be perfectly fresh.

But though economical with the Foliage and Trailers, we are extravagant with the Flowers. There is a general scramble for our old flowers, and I see them doing duty in the Housekeeper's room, and on the Kitchen dresser, so on principle we are extravagant in the quality, not the quantity.

Hemerocallis flava, truly named Day Lily, I always cut in bud—they expand well, also Irises, and each morning, snap off the bloom of the day before. These last do best in sand, for there is no getting entirely rid of the leaf that sheaths the stalks. Poppies must have the petals still crinkled, or better still, have half the calyx attached when cut. It is a hopeless business to pick off the table a fallen Poppy; in a moment the whole scatters, and the bald stamenless seed-vessel stands up, which is not ornamental.

Stocks (East Lothian), or double Wallflowers, are safest in sand, and look best in a mass, bedding-out style, with merely an edging of *Heuchera*-leaves against the crimson or white, or *Tanacetum crispum* with the purple.

Double dwarf crimson Sweet William, and the double Meadow-sweet, make a good combination,

and for a pale dish, China Roses and single Autumn Colchicums, or Crocuses, edged with Heuchera-leaves or Mangles' variegated Pelargoniums, or small leaves of *Tanacetum crispum*.

To go back to Winter, white pieces of small variegated Holly, and Ponisettia, were much admired, and lasted two weeks.*

To save my time, I have Snowdrops, in small bunches of five or six, unequal heights, and tied once, loosely, with a worsted thread, and when popped into their place the thread is loosened, and the little bunch has more the character of a growing one, each flower separate. A tight bunch of Snowdrops is hideous. Ponisettia, Euphorbias, Sanguisorba, and Corydalis must all be dry of their milky or yellow juice, before putting into water, or they are spoilt at once. I have never succeeded as well as my country friends do, with Bulrushes. They ought to be cut unripe, for when they burst, it is a hopeless business for the housemaid. Thistles, and Eiderdown, are nothing in comparison to the contents of a Bulrush, and there is no warning. I have the cruel taste to prefer keeping some flowers and leaves out of water, such as *Calycanthus præcox* and *florida*, Violets, Jasmine, *Magnolia fuscata*, Orange, and Citron blossoms, and *Aloysia citriodora* leaves.

I merely collect the Flowers, without stalks, and lay them in a china or glass dish, until their perfume is gone; it insures perfume to the very end.

Violets must be perfectly fresh; one day does for them, in water. *Jasminum Sambac*, and other Jasmines, will scatter their flowers, even when cut with the sharpest knife, and the Orange, and Magnolia, drop their petals. By this plan you save cutting the wood. Aloysia or Sweet Verbena, keeps no time in water, but its leaves are sweet when shrivelled.

There is no question but that Flowers look best with their own leaves, but discretion must be used, for it is a rule with very many exceptions. Not that I ever attempt to improve on Nature, but some leaves will not stand in water at all, or fade much sooner than the flowers, or take up too much room.

Artificial as a Garden must be, a plant is left to wild Nature there, in comparison to the circumscribed bondage of a Flower-glass, and only common sense and experience, will teach when this rule has to be dropped in practice.

You must find foliage for all Bulbs, for instance; then the leaves are more essential to the life of the plant than the flowers, not to speak of its form and this year's cuttings, and second crop of flowers, and next year's growths, all of which may be irreparably injured, by carrying out this rule. In short, in thoughtless, or ignorant hands, it is a dangerous one, and therefore I do not urge it. I have seen Carnations robbed of good layering grass, when there might be a rubbishy seedling or two, kept for their foliage.

I am no wholesale advocate for double flowers, and prefer them single, but must have both, for it is a fact that double flowers last much longer, both in the garden and the room.

The storm of last spring destroyed the beds of single Primroses and Hepaticas, while the double varieties of these, and Hose-in-Hose Polyanthuses, were none the worse.

Then, I cannot imagine any one admiring a bed of single cultivated Stocks, unless they had in their mind East Lothian seed, at 30s. an ounce. We cannot do without double composite flowers—Daisies, Pyrethrums, Chrysanthemums, Helianthus, &c., nor flowers like Roses, and Camellias, Cherry, Peach, and Thorn. A double white Hawthorn will last four times longer than a single one, and fade into pink into the bargain.

But I should like to condemn entirely, such flowers as have not merely their use, but likewise their beauty and character destroyed, by being double. A bell, minus its tongue, is not more uninteresting than a double Campanula, or Snowdrop, or Crown Imperial, concealing by its doubleness, the tears shed, as the old legend has it, at the foot of the Cross of Aspen-wood.

Long-tubed flowers, are much more beautiful single. A double Daffodil, looks coarse by the side of the wild one, and the beauty of a Day Lily, or *Lilium candidum*, is gone, when they are double.

I do own to a childish love of putting my finger up a Foxglove, or Gloxinia flower, and also of watching a big Bee carefully backing out of a *Digitalis*, and regularly going through the whole spike; also his struggles to open an *Antirrhinum* blossom. I have seen this last, double. A double Pansy, or Pea-flower, is truly a deformity, also the double *Nasturtium*; but I do not see why Hose-in-Hose flowers are to be condemned in the same way.

If a plant chooses to have a coloured calix I do not see why we should not grow it. The same rigid people who cast out a *Polyanthus* with a coloured calyx, as a monster, will rave about Christmas Roses.

In short, I think we should value whatever is good and useful in the plant way, for any of our many ornamental purposes, and try to steer between the abhorrence of a botanist for a cultivated flower, as we may call a double one, and the contempt of a florist for a single one. A true love of Nature, is sure to bring us back, at some time of our lives, to see things fairly, and I have utter belief, in the power of Daisies, to keep one spot green in the human heart, in spite of our now being all in a fuss to get out our Daisy-rakes, and other "infernally-machines" for beheading them on our lawns.

FLOWERS FOR DECORATION.¹

MANY object to Strong-Smelling Flowers in the room. My study is, to avoid any individual flower that overpowers the others, and my ideal is, to obtain the fresh perfume of an old-fashioned Greenhouse.

This perfume is quite peculiar and refreshing there is plenty of air in that greenhouse, a *Lonicera flexuosa*, outside, possibly a certain amount of Moss on the pots, a tuft of Lily of the Valley under the stage, a starved pot of Mignonette seeding on a shelf, old Davianums, and Fair Ellen, Pelargoniums, on the stage, and, above all, a Lady Mary Hay, up the back wall. A few words as to this last Pelargonium, which I never knew by any other name. It was one of thirty-three, distinct, sweet-scented Pelargoniums, we had at one time, but we have lost it for some years, although I have sought for it, from Inverness to the Isle of Wight, perseveringly, but as yet in vain. The flower is a good large Lilac, like General Have-lock, and the leaf is like Unique, only sweeter, softer, larger, and of a brighter green. If any of

¹ *Gardener's Chronicle*, August 31, 1872.

your readers have this old "Geranium," I would gladly exchange plants with them, for even a cutting.

To return to the smell of plants. My experience is, that they are never oppressive when the different perfumes are properly combined; then, they give real enjoyment to all. I do not see why the sense of smelling should not be as thoroughly cultivated, as that of hearing, and as the intervals that make up the chords of perfect harmony are at once detected by the educated ear, so should the plants be known that will satisfy the most fastidious nose.

Many plants I have named in this paper, are not altogether pleasant when squeezed and bruised—such as *Arbor vitæ*, Tansy, all the Umbelliferous plants, *Lobatum*, *Odoratissimum*, and *Tanacetum*, among sweet-scented Pelargoniums—but are perfectly innocuous (as almost all leaves are), when left alone, therefore I use them.

I have not named the Alliums we use, (and they last very long in water), for I felt there would at once be an outcry about onions and garlic; suffice it to say, we use five species—colours, dark maroon, rosy-lilac, yellow, and white—and that by proper management, we are not annoyed by having them in the glasses, but *Lilium auratum*, was only once, one morning, in the room. We hope to enjoy its overpowering perfume, in the open border this summer; it is not even in the Greenhouse, and this, is just the simple rule I keep to, viz., to use any flower or leaf

that does not give out its perfume when left alone, and to use no plant, however sweet-scented, that you single out at once on entering the room, as if it was the only perfuming flower there. I cannot give a stronger example of my theory and practice, than the use of the Alliums, and banishment of *Lilium auratum*.

It is an endless study, to investigate the varied smelling portions of plants, roots, stalks, leaves, flowers, seeds, flowers in bud, flowers expanded, flowers fading; some only having their full perfume when wet, others when the Sun is hot and dry on them. Those that only smell in the evening, have to be considered in the flower class arrangement, when windows must be shut, and the room gets close, with lamps. But I affirm, that the worst-smelling plant in its natural healthy state of growth, is less offensive, than an ill-kept glass of forced Lily of the Valley, Violets, or Mignonette. Such glasses, I have often suffered from, in rooms where the occupants would faint at the notion of having a light starry Allium in their glasses, because it is Garlic, which of course they must smell, after they discover its name!

There is still too much prejudice (I incline to call it vulgarity), against aromatic Evergreens, Rosemary, Lavender, Thyme, Gum Cistus, &c.; and as for aromatic Herbs, the kitchen is considered the only place fit for them. However, all the worse for those who have no pleasant country associations, from such old-

fashioned plants ; neither will they understand better, the garden allusions of Sir Thomas More,¹ or Bacon, or plants continually referred to in Shakespeare.

Scentless flowers, I am inclined to think, last longer than sweet-smelling ones, or possibly it may be, that these last, must be perfectly fresh.

The shape of Nosegays in Glasses, is of more consequence than the colour, and it is a more difficult part of the arrangement. To satisfy the eye, Tall Glasses must have three tiers of hanging plants, more foliage than flowers, and some spiky, feathery, finishing-touch plant. A Low Glass must have leaves of interesting formation, serrated edges, hairy surfaces, beautiful shadings and veinings, seen through the light, when on a level with the eye, and either scentless or delicately-scented flowers. It is well to learn, to observe, what plants will form roots in water, like the *Tradescantias*, or grow double their length in a week, like *Myosotis*, and *Chærophyllum* ; which expand by lamplight, and how many evenings they are able to continue doing so, like *Crocuses* ; what flowers shut up to an hour, out-of-doors, like *Gentians*, and *Gazanias*, and keep open in the room ; to see when Grasses are at the exact flowering age at which they last longest in water.

The most difficult point while arranging flower-glasses, is to know where to stop, because two or three sprays are an improvement to a glass. It is

¹ See page 706, *Gardener's Chronicle*.

human nature, I suppose, to be ready to stick in half a dozen more, and that is the good, of having the finishing-touch plant, a wiry, smooth stalk (be it either flower or foliage), so that it can be pulled out without disarrangement. It is best to be prepared for this fault, for it is sure to occur, and seems difficult to eradicate, although the consequence is seen the same evening, in the drooping of the overcrowded flowers.

Pittosporum mayii, I forgot to name, as an admirable Evergreen for all the year, and common Spurge Laurel is very useful in winter and spring, from its long stalks, sweet-smelling flowers, and berries, green and nearly black when ripe.

I have avoided naming Greenhouse and Stove plants, as much as possible, but a leaf of *Xylophylla latifolia*, lasts very long, and is a most peculiar and beautiful object, with its fringe of little flowers around each leaf, should the Plant be too large to be brought into the room. This interesting plant is far too little grown.

CUT FLOWERS. No. 1.¹

I HAVE often been asked to give some hints for different arrangements of Cut Flowers, and always feel inclined to ask in return, "Have you tried those combinations, I wrote about last year?" My correspondents begged me also, to give common names instead of the Latin ones, and where possible, I shall in these Notes, give both. But really the English name of a plant, is sometimes less known, than the Latin one—or sometimes, there is a misunderstanding about the name altogether. In Scotland we talk of a Plane-tree but mean a Sycamore (*Acer*), and of Syringa, but have Mock Orange (*Philadelphus*) in our mind, and would consider the nurseryman at fault, who sent us a Lilac. Then, *Hyacinthus non scriptus*, of one's young days, is a Scilla, and Bluebells, in England, are this disputed bulb, while in Scotland, it is *Campanula rotundifolia* that represents Bluebells. Surely there is not a more vexed Plant, than Wild Hyacinth, disputed over in both its Latin and English name. Linnæus himself, is pronounced

¹ *Gardener's Chronicle*, July 4, 1874.

wrong, and its divided perianth is torn open, to show that even he had made a mistake, in not classing it with the Scillas ; and Sir Walter Scott is misdoubted, as if he, who was so thoroughly informed in all country matters, would have made Fitz-James hunt the Stag, when the Wild Hyacinths were in bloom, and the Deer, still with the velvet on their horns, or expect Ellen's "tread," would not crush such sappy flowers.

Harebells, the Bluebells of Scotland, *Campanula rotundifolia*, make his poems read correct, both in the *Lady of the Lake*, and *Last Minstrel* :—

"And July's eve with balmy breath,
Waved the Bluebells on Newark heath."

It is necessary for me to premise and repeat, that my first object, has always been to use hardy flowers ; and my second, to work only with those that take the shortest time to clean and arrange, and those which last the longest in the Glasses. Arranging Flowers here, is a thing that has to be done, and if I had time and leisure enough, to make it a mere amusement, I would use a still greater variety, of different plants, and arrangements.

A flower like a Lily, for instance, that one sweep of the finger and thumb clears of leaflets, is a prize ; and those like Michaelmas Daisies, that require scissors to snip off the leaves, spoilt flowers, and useless buds, are a trial, particularly in the short days, when daylight is so precious.

Again, I must crave space, to expostulate on mere Fashion, interfering, with the use or disuse of a plant, be it a rare Exotic, or Hardy Flower, or a Grass.

Surely it is enough for that supreme tyrant, to reign over our houses, carriages, dress, furniture, food, and to twist upside down these two misapplied words, taste and vulgarity. I have frequently heard that inappropriate adjective "vulgar" applied to a plant, as if there was ever any pretence, or pretension, in Nature, or her works, and as if they could be vulgar; common they may be, and the wiser one grows, the clearer one sees, that it is the commonest and freest blessings that are the greatest luxuries—sunshine, air, water. Thus in the plant line, all the Stove plants in the world, could not make up for the loss of our Grasses and Daisies. There is no fear of Orchids, Stephanotis, and Gardenias, being despised or unappreciated. Have they not cost much of man's money, man's trouble, man's skill to grow?—and therefore in these mammonish days must they not be more beautiful, valuable, and enjoyable, than out-of-door flowers, fresh from the open air, sunshine, and rain?

Any mind that can see the extreme beauty, and fitness, in the commonest plant, is sure to be able to admire rare exotics, but the reverse is not so certain; nay, we often meet with a contraction, in the love of flowers, where indoor plants, or "florist flowers," (so-called) are exclusively studied, which

I fancy is not met with where out-of-door plants are the hobby.

A truce to moralizing; let me at once proceed to name any novelties, in the arrangements I have tried, during the last season or so, which appear to me worthy of note.

All *Spiræas* (Meadow Sweets) I have had—some dozen varieties—are useful, both for foliage and flowers. In early spring (March) the young undeveloped leaves of the largest one, *Spiræa Lindleyana*, are good; the whole stalk and rib of the leaf is then of a fine red (rich brown later in the season), very like, and quite as bright as, *Begonia splendens*; the shape is also peculiar, and in March, there is a scarcity of red for Tall Glasses. The pink and white flowers, of *Spiræa Douglassi*, and *Spiræa callosa alba*, last long, and look well together.

With *Campanula carpatica*, pale blue, *Campanula media* (Canterbury Bells), dark blue, or *Clematis Jackmani*, dark purple, sprays of *Spiræa ariæfolia* look well. All the white *Spiræas*, are of a warm yellowish tinge, which combines far better, I fancy, than a perfectly pure white, flower, with certain shades of colour.

The young shoots of *Hypericum androsaemum* (seedlings are brightest and best), of shaded warm brown, with one small yellow flower at the end of the branch, are very attractive; and even when the petals fall, the coloured calix, and pale green

young capsule in the centre, are as good as the flower.

When in Skye, last autumn, I saw this native St. John's Wort in its wild state. It is always a pleasure to find a plant for the first time.

Hypericum orientalis, is the most delicate St. John's Wort we have here; its young shoots, although not so highly coloured, make, from their way of growing, very good foliage; the lovely yellow blossoms, like little single Banksia Roses, are in profusion in November; and mixed with *Aster longifolius*, and the little dark red Chrysanthemum, "Bob," make a most lasting, and pretty glass. *Aster longifolius* is a great beauty, kindly sent us by Mr. Niven, of Hull; its double row of florets, were curled up, after four degrees of frost, while the single, *Aster simplex*, escaped unscathed. It is next to *longifolius*, for colour, that we have here, and is in perfection to the end of November.

A Glass of the following single Flowers, lasts long, (a double rose Carnation, added for the colour, looked coarse and deformed among them): *Anemone Honorable Jobert*, pure white, bright yellow stamens, green heart; *Thalia glabra*, clear lilac, yellow and blackish heart; *Hypericum orientale*, foliage; *Thalictrum* (Meadow Rue), small leaves of *Tanacetum boreale* (Tansy), *Ferula acerifolia*, and *Accena millefolia*, fine Fern-like leaf, with curious greenish flower-spike.

I think I am correct in saying, all bulbs that grow

on long stalks, in spikes or umbels, expand, and last long, in water, and it is better to cut them, while there are buds to come out, at the top—*e.g.* all Lilies, Narcissus, Irises, *Ornithogalums* (Star of Bethlehem) *Czackia* (St. Bruno's Lily), *Zigadenus*, *Alliums* (Garlic), *Gladioli*, &c.

Arundo conspicua, is beautifully light for Tall Glasses, much more useful, than plumes of Pampas grass; in fact, as with Bulrushes, I have always failed in mastering Pampas Feathers; they are too heavy, and sink down where they are not intended to go.

CUT FLOWERS. No 2.¹

CONTINUING my Notes of observation, I may remark, that the small grey-blue flowers, of *Eryngium maritimum* (Sea Holly), those of the pinkish *Anemone hybrida*, and the black privet-like berries of *Actea spicata* (Herb Christopher), looked well, with suitable green. At the same time (August), *Zigadenus*, *Clematis Jackmani*, and Scarlet Pelargonium, Dr. Lindley, formed a beautiful combination.

In November, long pieces of *Fuchsia gracilis variegata*, give slight pinkish spikes of foliage, for a high glass. A large glass of different Asters, such as large blue *Aster Bessarabicus*, small lilac *Aster dumosus* (almost white), *Aster multiflorus*, with a few sprays of the sulphur *Achillea serrata* (Millefoil), and two or three bright flowers of a yellow Rudbeckia, make a nosegay, that will not fade, or spoil the water, after being two weeks in the room.

The little Virginian Creeper, *Ampelopsis Veitchi*, of a lovely red in November, makes a charming Trailer for this combination. Two other fine Trailers,

¹ *Gardener's Chronicle*, July 11, 1874.

although not strictly hardy, are *Maurandya Barclayana*, and *Sedum carneum variegatum*.

This last for a Stove basket, is unexceptionable, and has outlasted two crops of various Tradescantias. The lowest leaves do not turn brown, and it hangs as if weighted, not turning up to the light, as so many Basket plants will do, thus spoiling one's plan.

This way of hanging, is most desirable for water, in which it also roots, and lasts for several changes of flowers.

In September, a simple glass may be composed of the foliage of *Ribes aureum* (Yellow-flowered Gooseberry), then of a fine dark-red colour; pale yellow-flowered *Lysimachia ciliata*, whose shoots are of a good brown, when first coming up in spring; and a few leaves of *Corydalis solida*. Late in the season small trailing pieces of the wild *Vicia cracca*, (Tufted Vetch), look well; also *Hippocrepis aurea* (Horse-shoe Vetch), for foliage, which may be used instead of *Acacia lophantha*, for which it is often taken.

I do not know why Gypsophila, so seldom expands its tiny blossoms with us. The plants were received some, direct from Germany, and others, from Salter's at Hammersmith, and are loaded with flower, but they open so sparsely, that they are practically useless, and therefore we have to fall back upon the neat little *Allium ciliatum*, for the same effect, or upon *Peucedanum gallicum* (Sulphur Wort), and wild Umbelliferous plants, which one can have in variety

from May to November. At Mr. Ellacombe's suggestion, we tried, and found, the buff buds and stalks, and white feathery flowers, of *Bocconia cordata*, very handy. The little dark brown *Galium pusillum* (Lady's Bedstraw), is more like gauze, than a flower in a glass; it and the black *Veratrum nigrum*, and black *Ranunculus*, are the three blackest flowers we use.

Aster Tradescanti, with small white flowers, and Heath-like leaves, makes in November, and December, a famous light foundation, for a glass, supporting anything dotted through it. The side-shoots of *Aster multiflorus*, are very dark, almost black, and look well among bright flowers and green foliage.

The cut-leaved *Myrica spatulata* (Gale), when coloured in autumn, makes excellent foliage; also Rosemary-leaved Box, the smallest, and narrowest leaved, of all the Box tribe.

Heuchera leaves (brown), double lilac Colchicum, and *Symphoricarpos racemosus variegatus* (gold variegated Snowberry), make a good flat glass. Other combinations may be effected, by the use of the following, as may be convenient: Small Irises, White streaked Sibirica, Blue Versicolor, and dark *Ranunculuses*.

The beautiful white *Libertia grandiflora*, and the real dark blue *Tradescantia virginica* (Spider Wort), *Hypericum orientale*, blue branching Larkspur, and *Anemone Honorine Jobert* or *vittifolia*; Inula, clear yellow, Gladioli in variety, and *Agapanthus umbellatus*.

(blue) may also be used. Pale blue semi-double Delphinium, (the single Herbaceous Larkspurs soon drop their petals, and are therefore troublesome,) Heuchera leaves and *Viola stricta alba*, which latter have firm long stalks, and a thick lasting flower, make a beautiful glass; as do also blue and white Aconite (Monkshood), and dwarf double Sunflowers.

Souvenir de Malmaison, Gloire de Dijon, or such-like Roses, and the top-shoots of *Rubus laciniatus*, may also be used. The Bramble leaves, lasting longer than many fresh Roses, may be used with advantage. Lomatia leaves for a change also last very long.

Ornithogalum Pyrenaicum, pale yellowish green, to hang round either a tall or low glass, and Ribes, white or double red, also answer well for this purpose; Anemone, Honorine Jobert, Clematis Jackmani, and Variegated Currant, *Acer negundo*, or variegated Rue, and *Acæna millefolia* for foliage; white *Campanula coronata*, magenta coloured *Gladolus Byzantinus*, and white *Veronica spicata*, also look well.

A Note book in which these combinations, with their suitable foliage, are jotted down, I find very useful to refresh my memory; every season adds to one's store, and possibly alters and enlarges one's ideas and fancies.

Occasionally I have in these hints compared a hardy plant, to a tender one. This is simply because I believe my readers will understand better what the

plant looks like. A wild Vetch leaf, is as beautiful as an Acacia, a tree Mallow, as an Aralia, an Arbutus flower, as a Cape Heath; I might go on *ad infinitum*.

I often hear the expressions, "a worthless plant," "not worth growing," *i.e.* not worth knowing, and studying.

What I understand to be meant, by a "worthless plant," is one, that does not happen to suit our artificial (puerile, at the best), plans. We are always limiting Nature's boundless variety, because we ourselves are contracted in our ideas, by this, or that, style of garden decoration.

I would strive to check such cramping contraction, in myself, and in those who work with me; and it seems to me, that the surest way to gain this end, is to pause before we throw aside any Plant, as being unworthy of our notice, and to remember, that when given to us by the Great Creator, it was pronounced "very good."

CUT SPRAYS OF CENTRADENIA ROSEA.¹

A FAILING of *Centradenia Rosea*, is the way in which it casts its blossoms, when brought into the house, and even when in the Stove. It is also very impatient of the dry atmosphere of a Room, where it flags. It has, however, one very valuable quality, viz., when cut, it stands for weeks in water, and for that purpose, and for Winter, when colour is scarce, it is very effective. Of a large plant, which, to tell the truth, was infested with bug, and condemned to be burnt, I, for experiment, cut off the clean branches, and filled a glass with them, and for a trailer used pieces of the bright green *Testudinaria elephantipes*, or Elephant's Foot. Both plants stood six weeks (December and January), and for three of these, in a room without a fire, during the extremely cold weather we had then. Not a leaf was shed, which surprised me exceedingly; and we are now striking a good stock to cut from next winter.

Centradenia floribunda, and *Centradenia grandiflora*, are both worth growing, the one, for its peculiar stem,

¹ *The Garden*, March 27, 1875.

and the way in which the leaves are attached, and the other, for its broader leaves, and larger blossoms ; but *Centradenia rosea*, shows the dark red underside of its leaves (a great point for Winter Glasses), better than these two last named kinds.

ON ECONOMISING CUT FLOWERS.¹

FLOWERS are so scarce at present that it may seem useless to talk of saving them, and time enough to begin in Spring; but, on the other hand, there ought to be no waste of flowers, when they are so valuable, and forced flowers, are very suitable for the use I wish to recommend them for. I observe a great waste of Cut Flowers—after being worn, they are thrown away. Now, if those worn in the evening, were cast into the Bath, or jugs of water, they would be refreshed, and many of them fit for use, by morning again; and those worn in the early part of the day, would be revived for evening.

Many Flowers, and Scented Foliage, give off much perfume, when floated thus in water, and the result is, a morning or evening Bath, of “sweet water,” more pleasant than any scented soap concocted by the perfumer.

Living in a Garden, and surrounded with Flowers, the plan I recommend is daily practised. Because one can have any quantity, or variety, of flowers, it is

¹ *The Garden*, February 6, 1875.

no reason at all why they should be wasted, and the fresh perfume of the water is a cheap and pleasant luxury.

Try the following, next Spring:—*Daphne cneorum*, and Sweetbriar, Yellow Azalea, and Sweetbriar; forced Roses, and Gardenias; Jonquils, Lily of the Valley, and Mignonette (forced); sweet scented Geraniums, of sorts, and Pinks, Lilac, and *Narcissus Poeticus*; *Syringa (Philadelphus)*; all Tea, Summer, Cabbage, and Portland, and Scotch, Roses. No attar of Roses, comes up to these last double varieties; Heliotrope, and Clove Carnations; Lavender, *Aloysia citriodora* (Sweet Verbena), and other sweet smelling herbs; Jessamine, and Lemon Thyme.

Orchids would be delicious, I am sure, and one flower of certain varieties, would perfume a large Bath, but I have no experience of these. Stocks, Wall-flowers, Honeysuckles, Lily of the Valley, and Mignonette, do not give off so much perfume as one would expect; why, I do not know. When forced, the two last, are more powerful, than when flowering in their natural state.

Perhaps, for true invigorating refreshment, Marine plants, and Sea water, is the most delightful Bath; but one may not always live by the Sea, or on a rocky coast, essential for the growth of Sea-Weeds.

VARIEGATED BORECOLES.¹

At page 238² some observations are offered on this subject.

The locality is not given, but the following remark—"must be borne in mind," that they "seldom present much beauty until the middle or end of February, and sometimes not until the end of March." On the experience of eighteen years, and, to quote Mr. McNab's words, "having the merit of being the first in Scotland, to apply Coloured Greens, for garden decoration"—moreover, having always consistently advocated their employment for the Winter Garden, on this ground, that without them, you can have no colour, in the common acceptation of the word, from the end of November, to the end of February—I beg emphatically to contradict "L.'s" assertion, as a necessary result. If sown at the right time, which varies according to locality, and if those seedlings only are transplanted out of the seed-bed, that show colour ;

¹ *Gardener's Chronicle*, March 28, 1868.

² See page 238 of *Gardener's Chronicle*, March 7, 1868, "Variegated Borecoles."

and, above all, if plants when only in beauty, be brought into the Flower Garden, there need be no disappointment in the Winter display.

Their beauty, once the Spring flower-growth comes on, in this month daily decreases ; colour and form going, distinctive character lost, symmetry and regularity of heights in beds destroyed—a more unsightly object, than a group of coloured Kale, one could scarcely name. Those who have not worked among them, can hardly believe that, unless the plants to be selected for seed are marked, before the “young growth” comes on, even a trained eye, could not select correctly ; a few weeks hence, it will be difficult to know a White, from a Mauve coloured plant, or a dark Siberian, from a Green. I grant “L.” that they “do not last long,” but they do last, and are perfect, during the whole Winter season ; and, surely, we may all agree in thankfulness, that, after all, the short days are a short season at the worst. The peculiar and legitimate time for the Kale, is the stationary, stagnant (if I may use the word, in connection with the healthy sleep of vegetable life), Winter months ; but there must be no chance work, no trust to growth, for beauty. Putting weather aside, as far as the plants themselves are concerned, the Winter beds, are the only out-door display, a gardener can count upon, as a certainty ; and for the period required, a stationary one, at least, it is mismanagement, and his own fault, if otherwise—not that of the Kales.

By March, any one can command every colour, with the use of Rhododendrons, Daphnes, Primroses, Scillas, and Crocuses, and is then, quite independent of Kale. Tastes differ, and there may be those who admire the spring growth of Borecoles most; let it be so; and others, who would carry on the use of them through the Spring (which may be possible, by management); but if this is to be done, it must be with another batch of plants, not with those in beauty at Christmas, and Candlemas.

I enclose leaves of a Savoy, "Bloemendaal," which I have in greater number this season than usual, and the effect of which, mixed in the dark Siberian beds, is most excellent. The rich Gold Savoy, catches the eye, even before the bright Purples; the colour is independent of Sun, a great desideratum for Winter.

As the sowing season is at hand, I am anxious that this Cabbage should be known, for ornamental purposes.

A great Reading firm, has the seed true, and it is particularly delicate, and mild for the table; so there is no loss, with those plants, unworthy of a place in the Winter garden.

I have not as yet saved seed of this variety, but hope to do so this season, my object being, to get its colour into my finely cut and Feathery strain; also into the old perennial Woburn Kale. The point about which I am most anxious is, that no obstacle, or

disappointment, be thrown in the way of the growing taste for Winter Gardens. Without Variegated Borecole beds, these cannot be lively or gay ; and there is a gradually spreading growth of this taste, which I have, with pleasure, quietly watched.

THE GARDEN IN WINTER¹

It is the practice to speak of the Winter months as dreary. November in particular, is described as gloomy, depressing, suicidal—always foggy, and altogether wretched. Now, truly this is maligning what (in Scotland), is often a very delightful month; and for depression to the amateur, I would at once select July, as the climax. Then, the longest day is past; Birds are neither heard nor seen (comparatively speaking); all our procrastination, and forgetfulness, all our mistakes in garden arrangements, stare us hopelessly in the face; the time and season are past for the year—past for sowing, and striking, and there is a sort of lull in Vegetation: all Nature has done her part, nothing has been forgotten, all its fulness of growth attained, to finally ripen the wood, and seed.

The first flush of Summer Flowers, and Flowering Shrubs is over, and in Scotland at least, in July, "bedding-out," is only beginning to be in its glory.

¹ *Gardener's Chronicle*, January 3, 1874.

Work for the amateur is not so interesting, and more, of only routine, that satellites can do quite as well, remains to be done.

It is too early for budding, or taking cuttings *en masse*, it is a ruinous month to tear up herbaceous plants—in short, it is too early, or too late, for everything.

Be out as early as you like, or can, the flowers are too exhausted to be gathered, with the belief that they will be satisfactory in water—they will not last over the second day. Now how satisfactory in November is the Cut-Flower department, for the flowers last so long; and as for scarcity, that depends entirely upon oneself. Why are not common China Roses grown in sufficient quantities? Rows and rows, and hedges of them; and how deep Pink is their colour, after gentle frosts, and how useful the young shoots are, in January and February for green, which one does not grudge to gather, as the bushes are not yet pruned!

Hybrid-Perpetuals, and other fine Roses, Chrysanthemums *ad libitum*, Asters, all sizes and shades of blue, lilac, and small white flowers, Carnations, Stocks, Mignonette, Tritomas, Violas, Pansies, odd stalks of Polyanthus, and Primroses, late spikes of autumn Phloxes, Penstemons, Gladioli, *Salvia fulgens*, and *Grahami*, and Ivy, autumn Crocuses, and Colchicums, all sorts of Berries, and ornamental Seeds, vary our store, Pampas, and Arundo plumes—in short, there is an *embarras des richesses*, for those who trust

to their own Garden, and arrange it properly; no difficulty with the Season.

Later on, in January, *Jasminum nudiflorum*, Laurustinus, *Garrya elliptica*, Alder, Hazel, and Birch, are showing bloom. It is interesting to see how determinedly the odd triplet (generally), of flower-buds of the last named tree point upwards, or outwards, even in a finely Weeping tree, of the other, named catkins, all droop; but I will stop my list with the Major variety of *Helleborus Niger*.

Our clumps of this favourite old plant are extra fine this year, there being ninety stalks on one plant, and three flowers, on some of the stalks, borne well up above the handsome large dark leaves.

Our Winter Beds are admired, but the rows of Christmas Roses are coveted by all, without exception.

Helleborus Niger, is later than the variety *Niger Major*, of which we had a good store in October. Seed-pods that seemed well set, and formed, damped off in spring. I much doubt this Hellebore ripening its seed.

Certainly it is a very fine thing, to see the Sun rise out of the Sea (I have seen it in my day), but in the Winter, the Moon makes a very good, and beautiful substitute, and that we can see conveniently, many an afternoon.

"Bedding out," is quite a refreshing business; it feels so long since Spring partings, and Summer beddings, and it is so satisfactory to know, that what you did in

November will continue, as long as you require it, and be quite invulnerable to all weather. You have no anxiety on that score, if you finished off in November, as you ought to have done. Then in September, and October, you are not able to give up the idea of its being late Summer, and Autumn, and making frantic efforts to keep up tidiness, and order. After November, your mind is made up; it is Winter, and there is some satisfaction in cleaning-up, in that month; and how full of promise, and hope, is everything! When the leaves are raked off, there are the Bulbs, below the heaps, perhaps a little forced, by the light warm capping, they had; Snowdrops, Crocuses, Narcissus, are all through the ground. The great plump buds of Rhododendrons, and Azaleas, the long white ones of Bays, one at the base of each broad glossy leaf—far pleasanter to crush, and smell, these buds, just now so fresh of almonds, than when in full spike of sickening bloom, in early Summer. Every Tree, and Shrub, has secured, as far as it could do, the certainty of a fine crop of flowers, and fruit, for next year. We need not torment ourselves, by recollecting how frequently Spring frosts blast all this fair promise. Be satisfied with the good prospect at the present, without which, the most unchecked Spring, would be of no avail.

The Evergreens, too, how fresh they all are, with young leaves and shoots; Hollies and Mahonias, particularly, are in great beauty.

Portugal Laurels, and Bays, how well they contrast when grown together, both in growth and shade of green—not trimmed shrubbery-walk bushes, but unpruned, uncramped, trees of twenty feet high.

The Portugal Laurels, compact and round, with red young wood, footstalks and buds, bright in the sun; and the Bays, wide spreading, on stems from the ground to the topmost waving branch, and separate-growing leaf, contrasting in green colour, especially in the wind, when the light sea green of the back of the leaf is shown with pleasing effect and variety. Our Arbutuses were all killed down in 1837, but by November, they used to be in fine show, of flower and fruit. The best berried bushes, had to be netted, to protect them from the birds.

The last November was exceptional, even in Scotland, where it is always a pleasanter month than in England, I believe.

Many a morning I went in the garden at daybreak, with the thermometer at 48°, and 50°, in a soft fresh south-west wind, and with Thrushes, Robins, Wrens, Tits, Sparrows, all singing and chirping, as if it were Spring. A *soupeçon* of untidiness is, I am sure, a great protection and comfort to the Spring, and Herbaceous borders, as long as too many leaves are not left to rot the soft plants below—Primroses, Myosotis, &c., &c.

And how many nice little tufts of leaves, do we find sticking up out of the ground, drawn down by industrious worms, aërating the soil, while so labouring.

If all were cleaned up by the end of the year, I think we have done very well. It is of greater importance, to get all ground thrown up rough, to catch every degree of frost, than to clean up leaves, which are doing no harm.

It is quite a fresh pleasure, to see again bare trees, and the buds all ready for whatever turns up, frost or Spring, and to observe with precision, what growth of new wood, the Deciduous Trees, and Shrubs, have made. They are likely to be safe; it remains to be seen how the evergreen growths stand through the winter, for they are not well ripened. The brown velvet Whin-buds look so pretty now, and the dead stalks of the Umbelliferæ, with their skeleton umbels, so wonderfully arranged, that each spoke of the wheel of bloom, so to speak, has its full share of Sun, and air, and dew. No disbudding is necessary in a Wild Plant; there is sure to be a sufficiency of seed.

I counted on a centre head of *Heracleum Sphondylium* (Cow-parsnip), fifty-two tough thread-like stalks, radiating from a centre, of the eighth of an inch in diameter; the actual flowers, again, arranged in similar fashion, at the end of each of these stalklets, in number beyond my power to count!

WINTER FLOWER GARDENING. No. 1.¹

WILL you permit me to offer a few practical remarks on the subject of that great desideratum, a Winter Flower Garden?

I have read with much interest, the Leading Articles in Nos. 48 and 49, of last year, and rejoice to see you taking up, this too long neglected branch, of Gardening. When it is remembered, that a Winter Garden must last for seven months, and on the other hand, that the Summer display, is at most, for four months, there is no question, as to which, is the most important, of the two. I have, therefore, given a good deal of consideration, to the former, and for fourteen years, our "modern Flower garden," has not been, "bare at this season of the year," nor has it once, been filled on the deplorable, makeshift, Plan, of "cut branches," merely stuck in the ground. That plan, however, I pass over with a certain amount of respect, as it shows, at least, the wholesome craving, for a Garden, all the year round, and the truth of that abhorrence of a Vacuum, which we inherit, from

¹ *Gardener's Chronicle*, February 7, 1863.

Nature herself. You suggest what to do. Will you hear what we have done, so that readers, of the same means, and with similar situation and soil, may be spared disappointment, and be encouraged to follow, your advice and suggestions.

Many have been the trials, and failures, with us, but we are now on a regular system, which suits our situation, close to the Sea and unsheltered, and our soil, which is poor and light; and year after year, we have had cheerful, gay, Beds, without disappointment, even in the Winter of 1860-61.

The Beds are on Grass, 35 in number, the Largest 23 feet by $7\frac{1}{2}$, and a Circle, of 13 feet diameter, and the Smallest Circles, of $5\frac{1}{2}$ feet diameter.

There is in each Bed, a Centre of Evergreens, a Border or Ring of Colour, an Edging of Variegation, and close to the Grass, early Bulbs. Now, the article of Colour, is my strong point, to which I wish to draw attention, and to popularise. Looking over your second Article, in spite of the long list, of costly, and beautiful shrubs, and plants, Colour, in the common acceptation of the word, is wanting, until the Crocuses bloom; and for the dead months, it must be so, unless you employ, the various varieties of the Brassica tribe. By the use of these, you obtain every shade, from the darkest Purple of the Siberian, to the vivid Magenta, Mauve, and Rose of the Borecoles, and also, pure, and yellow, White. All other Green, looks dead, when compared with the lively

growing Green of the German Kale, and in the unhearted, Dutch Cabbage, the various shades of Purple and Red, combined with rich bloom, have a very telling effect, in large Centre beds.

The names of Kale, and Borecole, at first, sound rather startling, as ornaments for the Flower garden, and in conjunction with Yuccas, *Thuja aurea*, *Skimmia japonica*, and the other tempting and beautiful shrubs named at p. 1148 of your Journal. I really know not, how they would combine; but then, that would be a Winter garden on a grand scale, which is beyond the means of hundreds, who, like myself, have constant enjoyment, and work, in their smaller gardens, and it is for this class, I write. Our first attempt, was on a grand scale. Variegated Hollies, *Juniperus virginiana*, and *canadensis*, Cypresses, Ericas, Berberis, Daphnes, *Rhododendron hirsutum variegatum*, besides those evergreens, which now I only use. Also, edgings of *Cineraria maritima*, *Santolina squarrosa*, Carnations, Pinks, *Onopordon acanthium*, Hellebores, Thymes, Hepaticas, Saxifrages, Alyssums, Stocks and Wallflowers; besides Bulbs, both early, and late, flowering.

The effect was all that could be desired, (except the want of Colour in Winter,) but it was a failure, because the first six classes of Evergreens, will not bear lifting, in the cold winds, and hot suns, of May, without care and trouble, which at that busy Season, cannot be commanded, in a small establish-

ment, where there can be no Reserve-garden, or Orchard-house, or unlimited number of hands. The outlay, was very considerable, but it was to be once for all, and the plants, were to last for years. Many were dead, few presentable, and none good specimens, by the next Winter. It was the first, and last, experiment, on a Grand Scale. A few shillings, *not* yearly, now suffice,

WINTER FLOWER GARDENING. No. 2.¹

THE following, are the Evergreens, I now employ ; their roots can take of themselves, and hold together, without a good ball of soil ; they are small-leaved, (with one exception,) and can therefore endure our unsheltered situation ; they are one and a half, and two feet, high, with the exception of three large *Rhododendron ponticum*, and two large *Aucuba japonica*, for the Centres, of the three largest Beds. They all stood the winter of 1860-61.

VARIEGATED.

Aucuba japonica.

Buxus sempervirens aurea.

„ „ *argentea*.

„ „ *pendula*.

GREEN.

Rhododendron ponticum.

Phillyrea media.

Buxus sempervirens.

„ „ *rotundifolia*.

„ „ *pendula*.

¹ *Gardener's Chronicle*, February 14, 1863.

Buxus sempervirens	lanceolata.
"	"
"	latifolia.
"	"
"	lucida.
"	"
"	myrtifolia.
"	"
"	marginata.
"	"
"	angustifolia.
Juniperus	Sabina.

The Colour Borders, consist, of the following varieties of *Brassica oleracea*: Red Dutch Cabbage, Triple Curled Borecole, White and Green Variegated, Purple Variegated, Purple, or Russian Borecole,—arranged in different ways—one, two, or three colours; Red, Purple, White, and Green, alternate or mixed; the Beds in pairs, generally.

The broken, and decayed leaves, are regularly stripped off, and sent to the pig-boiler, as are the whole plants, when the Season advances. There is no waste, of this valueless class of plants. Those selected for seed, are carefully transplanted. Everything, depends, on the seed being good; that it be not sown too soon, so that the plants are of suitable size, unhearted (where Dutch Cabbage is used), and not left in the Seed-bed too long, to become drawn, leggy plants.

The Variegated edgings, are permanent, except those of White Kale, and consist this year, of the following plants, viz.: *Hedera Helix arborescens fol. aureis*, grafted,—the plants of this Ivy, were five years old, I think, when I got them five years ago; from Mr. Barron, of Elvaston,—these Edgings, have been

the envy, of all who have seen them, both in Summer and Winter; *Hedera Helix fol. argenteis*, on its own roots, laid; *Veronica Andersonii variegata*—this is an experiment; it has stood, with slight, and partial, disfigurement, the 9° of frost, we had in November; *Arabis præcox variegata*; *Linaria Cymbalaria variegata* (also an experiment); *Stachys lanata*; *Vinca minor aureo-variegata*; *Phalaris arundinacea variegata*—this edging, is mown thrice, in the Summer, and never allowed to run up to flower.

The Bulb margins, consist of, Crocuses, (Yellow, Blue, and White, a different Colour, being placed around, each pair of beds,) for the twenty-two small beds; and Snowdrops, and *Eranthis hyemalis*, round the thirteen large figures. These margins, are never touched, except to be parted, when Bulbs are required elsewhere, and are not the slightest inconvenience, when the Summer bedding-out comes. I am against later flowering Bulbs, for the Flower-garden beds, because you cannot permit them to remain, until properly ripened; in fact, you find yourself wishing their beauty was over. To have them in the mixed flower-borders, is my plan, in groups of three. In one Border, there are five rows of Tulips, *Van Thol*, in the front, and the large *Rex rubrorum*, and *Tournesol*, in alternate groups, in the back row.

Now in all this, I do not wish, or mean to say, a word against the Plans, or Plants, you suggest, for

the Winter Garden ; but except in large Places, or with large means, these, will disappoint persons who may try them. There will be less outlay, and more satisfaction, in my less expensive arrangement, for the mass, who cannot afford to spend much ; and the grand point, viz., encouragement of Winter Gardens, will be promoted, till they become an "institution," as the "modern flower-garden" already is.

Economy, is my motto, in its true, broad, and liberal sense, which includes the saving of time, trouble, and temper, as well as £ s. d. To employ an expensive Plant, when a common one, will have nearly as good an effect, is, in certain circumstances, simply purse-proud extravagance.

To fill the Beds here, with plants of the same size, and number, in the shape of "worked" Hollies, and Yews, Conifers, Euonymus, and Ilex, and to fill the Colour-borders, would cost in price of plants, above 70*l.*, besides the certain loss, from transplanting, twice a year, and the risks of severe winters ; whereas, the money value, of my plan, for the Centres, and Borders, is, under 5*l.*, and some of the Shrubs, are from the original first outlay, so that such an investment, might really be trusted, as one, likely to have been made, once for all.

It is my present belief, that you must be satisfied, by having your "modern flower-garden," in perfection, in Summer, Autumn, and Winter ; and let the Spring flowering Perennials, be in the mixed flower

borders, with the late Bulbs,—Hyacinths, Tulips, Narcissus, &c.

Variegation, was a hobby of mine, long before Fashion, had made it the rage, and for the three following reasons :—1st, in our poor soil, the Variegation is kept up ; 2nd, with Variegated plants, you have a certain amount of Colour, and Show, at once, when you begin to bed-out, and one, that is independent of rain and sun ; and 3rd, nothing looks better, against Grass. Naturally, my next aim was, to employ hardy, permanent Variegation, thus reducing the amount of propagation necessary annually, and in this point I am succeeding.

Thuja aurea, will never in our day, be cheap enough to use, instead of Golden Chain Geranium. It would be admirable for such an edging, and its slow growth, would insure, its taking advantage of the protection of snow, in severe winters.

I would, that every one had as intense enjoyment, in a Garden, at all Seasons of the year, as I have myself, though they may not have my hereditary love, of it. I wish, that the expression so frequently heard in winter, "There is nothing to see in the garden just now," were, by the powerful help of your Periodical, rendered no longer a truth, and that I should have the same greeting, when visiting my friends in Winter, (and which they receive at all Seasons, when they visit me,) that I have in Summer, "Take a look at the garden before you come in," or,

“Of course you stopped at the garden, as you came up to the house?”

I set aside, failure from seasons, and weather, and make it a principle, never to grumble, at the effects, and disappointments, from either; but it does try the temper, when one has wilfully, or stupidly, used such plants, as experience has proved, to be a risk. Let there be risks, and experiments, in the other portions of the garden, but not, at least on the wholesale scale, in the Winter Beds. I have always some Plants, on trial, (and never have slavishly the same arrangement, for either Summer or Winter,) and if they fail, am always prepared with a substitute, at either season.

There is another neglected branch, of Flower Gardening, which I have been for years working at, and of which, I will send you a memorandum. It is for a Hardy, Herbaceous, mixed, Border, in which, I do not admit one Bedding-out plant, yet, it has even now, when the Bulb edgings, are not yet up, a good effect, and as it is in full view of the Drawing-room windows, I am determined, never to have it bare.

WINTER GARDENS. No. 1.¹

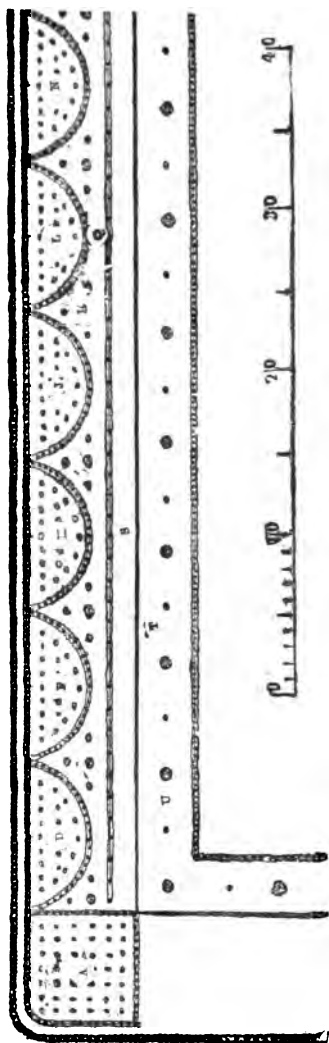
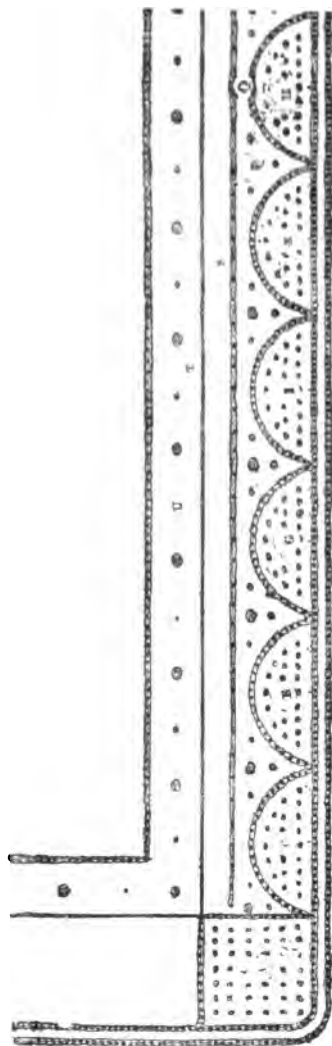
It is now eleven years, since I first sent some Notes on this subject, to the *Gardener's Chronicle*, and twenty-five years, since I began the style, and system, of Winter-Bedding, which I have pursued with success, (greater or less,) all these years; and I now wish, to make a final summing-up, of our Plan, and to record the modifications, and additions, I have seen fit to make, during these last eleven years.

My Garden, this season, satisfies me, more than it ever has done, and this opinion is shared in, by those gardening friends, and professional visitors, who have regularly inspected it, with critical, unprejudiced eyes, and from whose criticisms, and remarks, I have always gleaned some hints for improvement, or some faults to remedy.

What I wrote in 1863² (Nos. 6 and 7 of *Gardener's Chronicle*), I have no intention, or reason, to retract one word of, as far as the principle of the plan goes, in 1873. The special characteristics, of our Winter

¹ *Gardener's Chronicle*, January 10, 1874.

Note by Editor. See the two preceding Papers.



MODELS OF ORNAMENTAL CONIFERS, ETC., AT MR. METHVEN'S NURSERY, EDINBURGH.

Garden are, Cheapness, Colour, and Variety. Before, however, descanting upon my own garden, with its cheapness and colour,—both popular qualities,—and which, I take to be one extreme, of Winter Gardens, I wish to make some remarks, on the opposite extreme, the character of which, is “Costliness; and Beauty of Form,” but in which, there is no Colour, until the Crocuses, in early Spring, and imported Dutch Bulbs, bloom late, in Spring. Both styles of garden, are gay with Crocuses, but when the Hyacinths and Tulips are in flower, we have retired from our strictly Winter beds, to our strictly Spring border.

At Mr. Methven’s nursery, Edinburgh, there are two fascinating and valuable borders, of Coniferous Shrubs, and Bulbs, all planted in the late Autumn, and a plan of which, has been furnished me, by Mr. McKenzie, the manager, and which I inclose, (see Fig.), with list of names, and references. As it is so distinct, explanations from me, are rendered superfluous.¹

There are twenty-four Varieties, of Coniferæ; of these, seven are Variegated, Gold, or Silver; seven Bronze, or Brown; sixteen different shades of Green; and at present, this is all the Colour, of the materials employed, but one does not miss Colour, the Forms of the Shrubs, are so beautiful, so graceful and delicate, that the leaves, and growth, of *Aucuba japonica*, which form the festoons, look shapeless, and coarse, beside

¹ See Note at end of this Paper.—*Edit.*

the bed of lovely *Retinosporas*, it incloses; one variety is in each bed; half the borders, are edged with gold Thyme, and the other half, with *Kuonymus radicans variegata*; a row of Crocuses, are behind these edgings, and the Late Bulbs, are dotted in the beds.

In these Borders, there are Rows, of the brightest Green, of *Cupressus Lawsoniana erecta viridis*; the bright Golden-Bronze, of *Biota orientalis elegantissima*; the Glauous hue, of *Juniperus excelsa stricta*—and how faultless in shape, is this last! The peculiar merit of these Coniferous Shrubs, arranged in what I may describe, as a Coniferous Garden, is, that they have a decidedly distinctive character, even when small plants a foot high—possibly, their ultimate character, but on this point I am ignorant. I know, that it takes a generation, or a lifetime, for the Scotch Fir, or Cedar of Lebanon, to acquire their characteristic, flat, table, heads. Until I saw the *Araucaria*, at Dropmore, I had no idea, that the branches, at right angles to the trunk, were not the characteristic growth, of that Pine; but I am told *Retinospora plumosa aurea*, will still be a round-headed shrub, when, as it is in these beautiful borders, two feet, six inches, high. *Juniperus excelsa stricta*, is a miniature Tree, in the small size, the *Biota*, of as bright a Bronze, Pyramidal form, and Flattened branches, in the young, as in a specimen plant. *Cryptomeria elegans*, is as drooping,

and as distinctive, in having, (if I may so express it,) no distinctive character.

This strikes, and attracts one, very forcibly, in a Coniferous border, like Mr. Methven's. Such a Border, of ordinary Nursery stock,—Evergreens, Laurels, Bays, Arbutus, Aucuba, Laurustinus, fail entirely, in this very satisfactory point; they are young plants of these Evergreens, and nothing more, and quick as they grow, it is years, before they have their character.

A Pinetum, again, is only for large Places, and posterity, but a Coniferous Garden, is a new idea, to me, and after seeing Mr. McKenzie's arrangement, (which would have been more varied, had he not been pressed for time, and short of material,) it strikes me, small gardens, might have something of the sort, where the situation, and exposure, are suitable, and by those, who can afford the first investment.

It is rather a startling fact, to an Amateur, that the money value of these Borders, planted in November, is 120*l.*, besides above 12*l.* in imported Bulbs. There is this, to be said, however, a Coniferous Garden, is always increasing in value; for the next generation, at least, these Coniferæ will keep up their value, and there is sure to be an increased demand for them; thus, the Amateur could exchange, his carefully tended specimens, for smaller, or other varieties, when the roots are getting into soil they dislike, or the tops getting above the shelter line.

In really large Places, the Soil, and Situation, Climate, in short, of the Garden has been, or ought to have been, studied, before it was set down, where it is to last, to future generations; but in small Places, of from two, to ten acres, there is no choice.

Where the House does not stand, there grows the garden, in soil, probably formed of the *débris* of the house-building—any way, the number of small amateurs, must make the best, of what they have, and study, how to do so.

A Coniferous Garden, such as Mr. McKenzie has so successfully arranged, could not have been attempted twenty-five years ago, when we commenced our Winter Garden,—the plants were not introduced into this Country. I believe no class of plants, will tend more, to train, and cultivate the eye, and elevate the tone of gardening, for the mass, which has been deteriorated, (where the true love of plants is not inherent,) by the artificial style, of a blaze of short-lived Florist-Flowers. Mr. McKenzie declares, all the Plants in his Borders, are proved Hardy. It may be a longer, or a shorter time, before a Winter, so destructive, as 1860-61, may again occur, but, that such severe Seasons, do periodically recur, in our Climate, is a fact.

Nurserymen must run all risks,—must have the Stock, in hand, that will bring a sure return, and, besides, the quicker, and oftener, their Borders are cleared off, the better for them.

Amateurs are very differently situated, and must judge for themselves, if they will risk such valuable Plants, for a temporary purpose, like a strictly Winter Garden. It is a real temptation, to gaze, and resist trying, such an interesting Border; plants all clean, and ready to your hand, no picking and cleaning, as we have, with our Herbaceous, and even Evergreen stores,—and so many of these Coniferæ, have their most attractive appearance, on, for the Winter. It is altogether a tempting idea, to follow up, in one's own way; but I, for one, must content myself, with watching, effects, and progress, in these beautiful Borders, at the Warriston Nursery, in the meantime.

NOTE BY EDITOR OF THE GARDENER'S
CHRONICLE.

The following, are the references to Fig. (see page 284), which represents one half of the Plan sent us by Miss Hope. The omitted portion is similar in design, but slightly altered in the filling:—

A. Four panels of *Aucuba japonica*, with pyramidal *Golden Yews* in the centre; B. Two panels planted with *Retinospora plumosa aurea*, with standard *Golden Yews* in the centre; b. Two panels of *Juniperus Sabina variegata*, also with standard *Golden Yews* in the centre; c. *Retinospora filicoides*; d. *Retinospora lycopodioides*; E. *Chamæcyparis sphæroidea*; f. *Widdringtonia ericoides*; g. *Juniperus virginiana glauca*; h. *Juniperus Sabina variegata*; i. *Retinospora leptoclada*;

J. *Thuja orientalis compacta* ; K. *Retinospora plumosa aurea* ;
L. *Juniperus hibernica* ; M. *Juniperus japonica alba* ; N. *Chamaecyparis sphaeroidea* ; O. *Retinospora plumosa* ; P. *Juniperus japonica* ; Q. Festoons of *Aucuba japonica* ; R. Triangular spaces planted with *Cryptomeria elegans* in the centre, *Golden Yews* on each side, and *Biota orientalis elegantissima* and *Juniperus excelsa stricta* alternately in front ; S. A line of *Cupressus Lawsoniana erecta viridis* ; T. Wire fencing, 3½ feet high, on which are trained *Pyrus japonica* and *Gloire de Dijon* Rose ; U. A Border, 4 feet wide, planted with Standard *Rhododendrons*, 4 feet high, and *Tritoma Uvaria*.

WINTER GARDENS. No. 2.¹

IN your number for January 10, I adverted to one aspect of Winter Gardening, the beauty of which, no one will question, but which, as compared to the style which I myself adopt, for the sake of Colour, and of cheapness, may be deemed costly.

In my own Winter Garden, the centres, outlines of panels, groundworks, and edgings, are permanent, (as a rule,) therefore I can afford to have some of the Centres, of Coniferae, that will bear the Sea gales, and a Yucca or two—Centres that have to be lifted, in the busy, dry, windy, Spring-time, consisting of cheap, hardy, long-suffering Evergreens, like the Box.

The Colour, is in sufficient variety now, from Variegated Kale, in a few packed panels, (which method protects the leaves, in the fiercest gales, which began this Winter, last month, and from the very free circulation, of air,—to speak lightly,—our exposed Garden enjoys, we are completely secured from the unpleasant effects of tightly-planted Brassica,) and from

¹ *Gardener's Chronicle*, January 31, 1874.

dotted plants, of the Borecoles, which show off their varied forms, and colours ; so varied are they, that I find difficulty, in making up a pair, or triplet, out of the whole field.

Colour, we have also, later on in the season, from permanent edgings of Crocus, Narcissus, and Muscari, (the Snowdrops are now dotted on the grass slopes). Variety is secured, by fifty-five varieties, of dwarf Evergreens, and Herbaceous plants, (in addition to the permanent sorts,) added, when the Winter Garden was "bedded out," and finished off, in November. Of these, fifty-five, ten are Hoary and Glaucus, twelve Variegated, and eight of a Spiky, Grassy, habit, as Iris, Carex, Luzula, Acorus, *Libertia grandiflora*, (seedlings from Otago, given us by Mr. Gorrie, which he found hardier, than the plant generally met with). I grudged meddling, with this beautiful Plant, for temporary purposes, and am trying these Seedlings, in the beds.

We have large quantities, of these Herbaceous plants. Of Rue, which is included among the glaucous varieties, we have used thirty-eight dozen ; of Thymes, of sorts (excluding the Lemon, which is kept for green "Carpeting"), fifteen dozen ; of Feverfew, twelve dozen ; Variegated Teucrium, *Hypericum calycinum*, and the large-leaved Saxifrages, all, in quantities. Of Kales, instead of about 1,500, we have between 770, and 800, the dotting, requiring far fewer plants, less time and labour ; and by

Carpeting, below the dotted plants, the delicate Whites, and Magentas, are kept perfectly clear ; even in Winter our light soil, is ready to spot, and tarnish foliage, during rain. By dotting, also, we can carry on, the planting of our Winter Garden, in damp weather, that would be destructive for "packing," as sure to dirty the leaves of the Kale. A sharp syringe, is a great improvement, to both Kales, and Sedum, and Saxifrage Carpetings, immediately on being finished, before any soil, can dry on the foliage.

I have not had to buy a single plant, of the thousands, that have passed through my own hands, either to be selected, cleaned, and prepared for planting, or set down, in the exact spot, they are intended to fill. Every plant, even in November, gets a check, when transplanted ; therefore, the leaves, which one knows will sicken, are removed before planting, thus a deal of trouble is saved, with a tiresome, small-leaved, plant, like Rue, for instance ; or soft, easily crushed leaves, like Feverfew, *Stachys lanata*, or Variegated Cress. To pick over an edging of Rue, when planted, would be most tedious, and unsatisfactory.

Iris and Carex, &c., must have their faded, stringy, leaves, removed, no chance of wind or frost causing them to drop, and their brown tips, should be pointed off. Amateurs do these things, far better for themselves. Grown in lines, plants will have backs, and fronts, and sides. All defects, must be considered, and the north, or south side, of the bed,

taken into account, when planting. Although they will not grow, in Winter, they will contrive to turn to the Sun.

Our most striking addition, to the Winter Garden, at the suggestion of Mr. Gorrie, consists of fine plants, above four feet high, of *Lavatera arborea*; they have quite a grand appearance; but whether their large leaves, (a point I always avoid in our very airy Garden,) will all be broken to pieces, before the Winter is over, remains to be seen. These Tree Mallows, have attracted great wonder, and admiration, (growing in beds prepared for Stocks, they are extra fine,) and have been taken for Figs, Aralias, Brugmansias, (I suppose because they are big!) and Castor-Oil Plants. No Amateur, I grieve to say, has known, this native of the Bass Rock, and other barren islets, of the neighbouring Firth of Forth,—the stateliest British Herbaceous plant, I believe, not even excepting *Heracleum*, and other Umbelliferæ.

In Arran, and on the Ayrshire coast, it grows to the height of twelve feet! It is curious, but a pity, to hear, how glibly the Exotic foreigners, are named, while this native Mallow, is hardly known.

To sum up as to the Kales. I have failed in my experiments, with the Golden Savoy, Palm-leaved and proliferous Kales, and they are discarded for the present. I have seen proliferous Kale, from foreign seed, like bunches of purple grapes, and

ambitious visions, of raising pure White, and bright Lilacs, and I did get one White, and a few poor, Light Purples, but got no further.

When we began, my object was, Hardiness, and Dwarfness, and the pattern I set before me, was the dark "Siberian," (true), therefore, best selected plants, were, at regular intervals, planted through the whole break of Kales, chosen for seed. We have gained our object, and have in our own particular seedlings, Hardiness and Dwarfness, but our Purples are, as a whole, of too dark a shade, (this can be remedied,) and we have entirely lost the true Siberian—this is our only real loss, in the Kale department. Mr. Peter Robertson, from whom we got the original stock, has also lost it, and cannot procure it, from his foreign correspondents. I do not think, that there is one plant, I shall care to seed this season, as a Siberian, and for several years past, it has been two, or three, not true specimens, that we have had to seed.

The old "Woburn," is still, I believe, the only Perennial, because it so very seldom, and sparingly, flowers. In any case, I never let it flower, now, here, and have got, what we term, a "Green Woburn,"—and a very beautiful variety,—and also a White one, coming on, I hope. This Vivid Green form, I find, attracts even more, than the Magentas. All agree in liking it, but in Winter a lively Green, is of the first importance in the Beds, and for that reason, the

common single, and double, Feverfew seedlings, are, we find, most useful. They are greener, than the Grass—ours, at least.

I still find the common "white Variegated Borecole," with smooth leaf, and large surface, the only variety, that suffers from Sun, after frost and snow. Our own White seedlings, are perfectly hardy, being very Curly, Warty, and Cut, in the leaf. Mr. Anderson Henry, some years ago, thought our varieties were getting too fine, and would prove delicate, but I have not found it so. In some, the leaf has all begun and ended, in rib, (more peculiar than beautiful, I own,) and others, have hardly any rib, and the leaf portion, is dissected, and re-dissected, into the minutest, separate, little curls; others are so dwarf, that I dare not lift them, without a fork or spade, as there is nothing to get hold of, but the leaves above the ground, and a carrot-length of root, below the soil.

Now, I have finished, once for all, about the Kales; they have, for above twenty years, Beautified, (no other word suits,) our Winter Beds, and given us, and all our Garden Friends, enjoyment. They have turned those Winter foes, (as many consider them)—Fogs, Mists, Hoar Frosts, and Sleet, into effects, for pleasure, and study, in Gardens; effects, that are generally to be observed in perfection, only, in Glens, and by Burn-sides.

"Frosted Silver," and "Diamonds," are expletives, I

hear, used in connection, with Winter effects, on our Kales, but as Silver is not frosted, nor do Diamonds sparkle, *au naturel*, but as both must pass, through the Jeweller's hands, to do so, I prefer, to keep to plain words, and the fact, that all Varieties, of Winter Weather, add varied beauties, to these Kales,—beauties, which, without them, would be unnoticed, in the Flower Garden.

APPENDIX.

I.

WINTER GARDENING.—THE KALE BEDS.¹

PEOPLE are apt to ridicule any attempt, to decorate Flower Beds, with Kale.

We have been the rather accustomed, to associate it with corned-beef, and the "Kale-Yard," and hence the prejudice, against transferring it to the Flower Garden. One can scarcely be reconciled to the change, from the Useful, to the Ornamental, without very strong evidence indeed.

No puny efforts, will raise it to a prominent position, and the tyro, who makes the attempt, to mould the varieties of Kale, into objects of beauty, will, probably, retire from the whole thing, in disgust.

Miss Hope, of Wardie Lodge, has for a long time, been the redoubtable, Champion, of the Kales, and her efforts in her own Garden, have, beyond question, been successful, for her Kale Beds, would add both grace, and beauty, to the most imposing Flower Garden.

¹ *Gardener's Chronicle*, January 9, 1869.

Gardens, at this time of year, are generally remarkable for baldness, and for the want of diversified Colours, to brighten up, what are looked upon as the choicest spots out-of-doors. Miss Hope's, Garden, after being divested of its Summer garniture, is equally well, and comfortably dressed, with material, suitable for Winter clothing, and, forsooth, it wears, by no means sombre habiliments. The gaiety, and diversity, of the Colours, greatly astonished me.

Let me cite two or three examples, for illustration, beginning first, with the Centre piece of the design.

It is a Circle, divided into eight segments, the partitions being Variegated Aucubas, the Centre, a nice portable specimen, of the Irish Yew, and the sections, filled, or rather packed in, with divers, coloured Kales. Now, those who never saw such arrangement, might suppose that the Bed, was a tall, gaunt, hideous-looking thing, with a goodly portion of bare-legged Kale stocks, staring you in the face; but it is no such thing. The labour incurred, in sinking the hundreds of them, required for the Bedding question, so as to have the leaves resting flat upon the soil, must be something considerable, but the effect is such, as to repay the labour. That Bed has a fine, *bizarre*, appearance, and is all the more conspicuous, from being elevated above its fellows.

By far the most chaste Beds, are, however, some curved Parallelograms, surrounding this Central, or key bed, and they are of ample size, to afford scope for design.

Laying across the Beds, are four diamonds, equidistant, and forming raised panels, filled with Red, Yellow, and Whitish Kales; while in the centre of the diamonds, are Standards, about the size of an umbrella, upon which, Variegated, and choice Ivies, are clambering.

These Beds, are quite as effective, and more quiet, and chaste, than some Summer beds, I have seen.

The Groundwork, is planted with Rue, which has a good effect, against the Variegated Hollies, which form the boundaries, of the diamonds, and the belting, of Variegated Ivy, that marks the outline, of the Beds. No Hardy Shrubs, even of the rarest, and most commanding character, could at all cope with this, for effect.

Moreover, the Groups are easily surveyed, by the eye, and would be generally acceptable, to admirers of effect.

Again, the subsidiary, and detached Beds, that teem upon the Grass-plat, are each, of themselves, worthy of inspection, and have something individually, to recommend them. Nothing could be less objectionable, than Beds of Stonecrops, with the most finely cut-leaved, and highest coloured, Kales, set amongst them, and the whole incircled, with the Variegated Periwinkle. The more select Flags, are inserted at intervals, in some of the arrangements; and then there are both groundwork, and broad beltings, of the Fine-leaved Thyme, and edgings of the *Gnaphalium lanatum*, which very much relieve the sameness of the Kales. The whole, forms an example, of accomplished Gardening Art.

An effect can positively be given, which those who have never seen it, little dream of; and the undulating style, which Miss Hope patronises,—now raising, now flattening the beds, and duly balancing Size, and Colour,—is such, as evinces correct taste, and makes her Winter Garden, quite as worthy of a critical examination, as a fine Landscape, from an Artist's pencil.

Careful selection, and a determined elimination, are evidently required, to procure such an admirable breed,

whose quality, is combined, with desirable variations in colour. The question that escaped my lips, and which must present itself to most readers, is, "How do they stand the Frost?"

"They have stood, every Season," replied Miss Hope, "with impunity, when even the Hardest, of the Curly Greens, have been injured."

This is most important evidence, and is the best certificate possible, for maintaining the Kales, in their prominent position, throughout four, of the dullest months of the Season.

As regards preparation, there must be Growing Space, afforded, during Summer, proportionate to the demand, and this, is what, most people, will be ready to find fault with. "There is nothing can be provided cheaper. You may talk of Shrubs, and their suitability for this sort of work, but the Kale can be used, quite as effectively, and at one tithe of the cost." So said Miss Hope; and I need only point, by way of comparison, to the accommodation provided, for even the most common of the Summer-Bedders, to the cost of Spring Bulbs, and to the labour, incident on the getting up, of the many beautiful articles, used in Spring-gardening.

The labour involved, in the massing of these Kales, in their various Winter Beds, must, however, be by no means inconsiderable; *four feet* of their *stems* are *buried in the ground*, and they offer no opposition to the ordeal. Then, they are packed together, as if one were packing, for economy of space.

With Miss Hope, they are all inserted in Beds, on a Grassy groundwork, and this seems to be the better way, of exhibiting them to advantage.

Order, of the highest character, is maintained, and

litter, scrupulously looked after, and the Lawn rolled, and kept firm, as a Bowling-green.

One word, as to the different phases, of Decorative Gardening. It seems to be an unsatisfactory mode, to attempt Winter Gardening, Spring Gardening, and Summer Bedding, all in the same Parterre, if it be an instruction, that each, is to be of representative character. Bulbs are beautiful in flower, but unsightly, when the green foliage springs up, or shows symptoms of decay.

It is true, Winter Gardening, and Summer Bedding, can be managed thoroughly.

Spring gardening, does not come a bit too soon, for the anxious admirer of Flowers, but it has a tendency to tread too closely, upon the heels of "Bedding-out" proper, and many fine lots of Bulb foliage, have to be prematurely sacrificed, or otherwise the whole removed, to auxiliary quarters.

All the phases, may be had respectably, but one is so ambitious now-a-days, that something near, irreproachable Decorative Gardening, at all the Seasons, is the grand aim, of both the Sightseer, and the Grower.

J. A.

II.

VARIEGATED KALES AT WARDIE LODGE.¹

EVER since Variegated Kales, have been used for Decorative purposes, at Wardie Lodge, they have been planted for Ornament, more, or less, not only in Scotland, but also in England, and very effective they are, where good kinds, are employed. A Correspondent, signing himself "Argus," writes thus, respecting his ornamental Kales :—"Never," he says, "have I seen them so lovely, as they are this year. The Snow-Whites, rich Crimsons, and other hues, contrast, and light up, the quarter, in which they are planted, with as much Beauty, even at this dull season, as is to be met with in our Summer gardens. But I must add, that there are few of the stocks of Variegated Kales, that are worth growing, and I hope that the attention of some of our Seed Growers, may be directed to this matter.

I have grown Kales for years, and have had supplies from many sources, but have always been disappointed, until this year, when their beauty is indisputable.

¹ *The Garden*, "Notes of the Week," January 18, 1873.

III.

GOLDEN THYME.¹

PERMIT me to state, in answer to the inquiries of Miss F. Hope, of Wardie Lodge, and others, that the Thyme, about which I wrote in *The Garden*, is that which was sent out, by Messrs. Fisher and Holms, under the name of *Thymus citriodorus aureus*. It has stood the Winter extremely well here.

D. T. FISH.

¹ *The Garden*, May 31, 1873.

IV.

NOTES OF THE WEEK.¹

WE have received from Miss Hope, of Wardie Lodge, Edinburgh, some unusually fine blooms of the Double Pot-Marigold, which, as Miss Hope justly remarks, "is not cultivated so extensively, as it deserves to be." Blooms, produced by plants of it, raised from carefully saved seeds, show little, or no, heart; indeed, they are as Double as a *Ranunculus*, and by having self-sown Seedlings, of different ages, Flowers may be had, during ten or eleven months in the Year.

¹ *The Garden*, June 27, 1874.

V.

WARDIE LODGE VARIEGATED KALE.¹

“ Notwithstanding the severe Winter, that we have had, this Kale has become an object of beauty, in the Flower Garden, and its young leaves, and sprouts, look pretty, used for Room decoration, along with Croci, Narcissi, and other Spring flowers.”

¹ Note by William Lawrie, Lynwood, Alva, in *The Garden*, April 10, 1875.

VI.

PRIVATE GARDENS OF NOTE ROUND EDINBURGH.—WARDIE LODGE.¹

MISS HOPE, of Wardie Lodge, in the vicinity of this City, is so well known to the readers of these pages, as an enthusiastic gardener, that it will be no matter of surprise to any, to hear that her Garden, is, as a garden should be, replete alike, with interest, and beauty.

Herbaceous Borders, and Terrace Beds, crammed with a varied, but choice collection, of Plants, well arranged, and well tended,—these are what will strike the eye, of any Visitor, who may be privileged, to have the *entrée* to this Garden.

The Reserve beds, in out-of-the-way corners, and the Kales, in their Summer quarters, also, have much interest; while indoors, the Visitor, may perchance see before him, the evidence of his want of knowledge, or care. It is Miss Hope's practice, to seek the name of a Plant, now from this one, now from that one.

The consequence, not unfrequently is, an array of Synonyms, which are duly registered, together with the "authority," on the tallies, which confront the Visitor as he passes through the Houses,—it may be, to his confusion.

¹ *Gardener's Chronicle*, September 11, 1875.

VII.

THE LARGE-FLOWERED CHRISTMAS ROSE.¹

I HAVE to thank Miss Hope, for giving us such ample Notes, about this interesting Plant, and especially, for amending my statement, that it is very easily increased.

My reasons for saying so were:—First, that a very small plant, which Miss Hope, was kind enough to give me, in 1872, has increased so much in size, as to have been, for two months, the principal ornament, of the Border, in which it is placed; and Secondly, because I had the pleasure, last October, of inspecting a Bed, filled with young plants, at Wardie Lodge.

At all events, we may be grateful, that this beautiful, and rare Plant, is not so slow, or difficult, in propagation, as, for instance, *Trillium grandiflorum*, *Rhexia virginica*, *Spigelia marilandica*, and others. The fact, that this Variety has not seeded, seems certainly to point, to a Hybrid origin.

Helleborus niger, is just coming into flower, with *orientalis*, whereas *niger major*, or *maximus*, began in October, and is still sending up immense flowers.

The present scientific name, is extremely awkward, and the variety is so perfectly distinct, from any other, that I think, it should be called *Helleborus Aberdoniensis*, a name, which points to the Northern origin, of the plant.

¹ *The Garden*, January 8, 1876.

Miss Hope deserves thanks, for raising her voice, against the growing habit, of forcing Hardy plants. There is no excuse for it. The Conservatory, can be supplied with numberless Exotics. Let our Seasons, be marked, by the return of Hardy Flowers, at their appointed time. They will be all the dearer to us, and not less plentiful. If Alpines, and Hardy Flowers, are grown under cover, let it be either in pots in a cold frame, or, better still, in an Alpine-house, which is a thing, we should see oftener, than we do.

“SALMONICEPS.”

VIII.

DO CHRISTMAS ROSES SEED? (See page 535,
vol. viii. of *The Garden*.¹)

It appears that Mr. Ellacombe is of opinion, that the Christmas Rose, can reproduce itself from seed. A fact, concerning which, Miss Hope replies, "that Bitton, is an exceptional place;" and that is true, as all must admit, who have been fortunate enough to visit it, but certainly not, as regards the seeding of the Christmas Rose. It is now ten years, since I purchased three plants of *H. niger*, and at the end of two seasons, one of these had grown so large, that I determined to cut it up, which division, gave me twenty-five plants. This was done, just before, the young leaves made their appearance, or at the end of the blooming season, which is, by far, the best time, to divide Hellebores, as if well looked after, for a short time, they soon grow on, and do not remain dormant, for an indefinite period. These twenty-five plants, were put into a bed, in the kitchen garden, and at the end of two years, I observed in one corner, a batch of Seedlings, which appeared to be small Hellebores, but to make certain, I allowed them to grow on, until the Autumn, by which time, they had attained the height of six inches, when, no doubt, could be entertained, about their being Seedlings, from the Christmas Rose. I am therefore convinced, that in some seasons, under certain

¹ See Article "Large Flowered Christmas Rose," in *The Garden*, January 1, 1876.

conditions, not at present, perhaps, accurately known, this Plant, does seed, although apparently, the fact, is still a matter of doubt, with many. I now much regret, that I did not bloom these seedlings, as probably, they would have shown some variations, from the original, and consequently, might have been valuable. I have tried to seed *H. maximus*, at present without success, but two years since, I used its pollen, to hybridise *H. colchicum*, and from this, I have a small batch of seedlings, which, judging by the foliage, show, that the cross, has been effectual.

BERKS.

THE END.



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